



**US Army Corps
of Engineers**

Design-Build Instructions (DBI)

For

Military Construction

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**Headquarters U.S. Army Corps of Engineers
Directorate of Military Programs
Washington, DC 20314-1000**

INTRODUCTION

The concept of using one entity to design and construct a facility is not new. This concept can be traced to facilities as far back as 1800 BC, where "Master Builders" designed and constructed buildings by commission for kings and emperors. This early form of "design-build" was at that time considered traditional. The name "Master Builder" has changed over the years and so has society's political-economic structure, but the concept remains the same.

Today, design-build is considered "Non-traditional," and has been such since the 1800's AD. Economic philosophies, complexities in design, engineering, and construction have played significant roles in creating the environment for the current "Traditional" form of facilities acquisition, viz., "Design-Bid-Build," where design and construction are accomplished under two contracts.

The current trend is to continue using the "Design-Bid-Build" process, but to develop other processes for acquiring facilities, and then select the best and most appropriate process compatible with the circumstances and requirements of the project. This is where government and private industry are today.

This Design-Build Instruction (DBI) has been developed to provide criteria and guidance to accomplish design-build contracting by U.S Army Corps of Engineers Major Subordinate Commands (MSC), District Commands, and field operating activities (FOA) for Army construction projects. The HQUSACE Nontraditional Acquisition Team (NAT) has authored this document, and acknowledges CECER-FFA for their assistance with this DBI. The NAT serves as the focal point for development of policy and guidance for design-build and other non-traditional acquisition methods.

The DBI is a living document and will be periodically reviewed, updated, republished and distributed primarily through the Construction Criteria Base (CCB) Compact Disc (CD-ROM) automated information management system available from the National Institute of Building Sciences (NIBS), 1201 L Street, NW, Suite 400, Washington, DC 20005-4024, (202) 289-1092. Recommended changes to this DBI, with rationale for the proposed changes are welcomed, and should be sent to HQUSACE, ATTN: CEMP-EA, 20 Massachusetts Ave, NW, Washington, DC 20314-1000.



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ABBREVIATIONS

A-E	architect-engineer
AL	acquisition letter
AR	Army Regulation
CBD	Commerce Business Daily
CECER	Corps of Engineers Construction Engineering Research Laboratory
CEGS	Corps of Engineers Guide Specification
CO	Contracting Officer
COC	certificate of compliance
COE	Chief of Engineers
CSI	Construction Specifications Institute
DA	Department of the Army
DBI	design-build instructions
DPW	Directorate for Public Works
DUNS	Data Universal Numbering System
EEO	Equal Employment Opportunity
EM	Engineering Manual
ER	Engineer Regulation
FAR	Federal Acquisition Regulation
FY	fiscal year
HR	House Report
HQUSACE	Headquarters, United States Army Corps of Engineers
HVAC	heating, ventilating, and air-conditioning
IFB	invitation for bid
MACOM	Major Army Command
MCA	Military Construction, Army
MCACES	Micro Computer Aided Cost Estimating System
MP	Manual of Practice
NAFCP	Nonappropriated Funded Construction Project
NTP	notice to proceed
OSD	Office of the Secretary of Defense
PDB	project development brochure
PM	project manager
PWC	public works center
QA	Quality Assurance
RFP	request for proposal
SA	supervision and administration
SF	surcharge funded
TM	Technical Manual
USACE	U.S. Army Corps of Engineers

CHAPTER 1

GENERAL

1. BACKGROUND.

a. Since the early 1980s, the Congress has urged the military services to explore alternative construction methods. An area of particular interest is procurement by nontraditional approaches such as "Design-Build," which include both design and construction under a single contract. In many cases, this procurement process may have an advantage over the traditional, two contract, design-bid-build method.

b. "Design-Build" is similar to "one-step turnkey selection procedures" referred and defined in Title 10 United States Codes, Section 2862. The one-step procedures will hereafter be referred as "design-build."

c. The U.S. Army Corps of Engineers (USACE) has undertaken several projects in recent years to test the applicability of these procurement procedures as well as alternative construction practices (e.g., architectural fabric structures). The results of these tests have been very favorable, suggesting that with careful planning and execution, "Design-Build" can be advantageous.

2. PURPOSE. The purpose of these Design-Build Instructions (DBI) is to serve as a guide to pursue design-build projects. The DBI provides the foundation for planning, development, and execution of a negotiated, firm-fixed-price design-build contract. It is intended to promote a consistent, proper, fair, and efficient process for design-build throughout USACE. The DBI should be used by design agencies to develop formal procedures for accomplishing design-build projects.

3. GENERAL.

a. The design-build process uses a Request for Proposal (RFP) to solicit for design and construction of a facility by a single contractual entity; viz., a "Design-Build" firm, or joint venture between architect-engineer (A-E) and construction firm, or a construction management (CM) firm joint venture with an A-E and a construction firm.

b. A design-build RFP states the project functional requirements, design and engineering criteria, technical performance specifications, and proposal evaluation factors. Potential contractors develop their proposals for the government to evaluate competitively, with the contract award based on a combination of technical merit and price. Therefore, the contract is awarded on the basis of not only initial construction cost, but also technical quality, offeror qualification, management expertise, life-cycle costs, esthetics, and other factors

important to a specific project as identified in the RFP.

c. The flow of activities in design-build projects will vary depending on unique requirements and circumstances of each project. However, there is a basic flow for design-build projects that should be used as the standard for beginning a project. This DBI contains guidance and graphics that indicate the basic flow for activities in a design-build process.

4. AUTHORITY.

a. The use of the design-build process for military construction projects is authorized under Title 10 U.S.C., Section 2862, with permission of the Secretary of the military department concerned. The Assistant Secretary of the Army for Installations, Logistics and Environment (ASA (IL&E)) has delegated approval authority for Army design-build to the Headquarters, U.S. Army Corps of Engineers (HQUSACE), Director of Military Programs.

b. Engineering Regulation (ER) 1180-3-1, "Design-Build Contracting for Military Construction," indicates specific requirements for USACE Major Subordinate Command (MSC) or district commands, hereafter referred to as the "design agency," must use to obtain authority to use design-build for a project.

5. **APPLICABILITY.** The criteria contained in this DBI apply to Army projects for facilities that are authorized and directed by HQUSACE to use the design-build process, except family housing, Nonappropriated Funded (NAF), and Surcharge Funded (SF) projects. The concepts addressed in this document are appropriate for a Civil Works project when the use of design-build contracting is approved by HQUSACE (CECW-ZA) for the project.

6. ORGANIZATION. This document provides:

a. guidance for construction of buildings and facilities at Army installations using the design-build process.

b. detailed project planning, development, and implementation procedures for the design-build process consolidated into a single document and structured such that all persons involved in the design-build will be able to obtain a basic understanding of the total process.

c. procedures in Appendix A for determining whether a project is suitable for using the design-build process. Design agencies should use the process in Appendix A to assist in the acquisition planning process to determine the appropriateness, and to obtain approval to use the design-build process.

CHAPTER 2

BASIC STRATEGY AND PROCESS

1. **GENERAL.** When using the design-build process, it is important that the design agency develop and implement a management plan that uses a "corporate" approach rather than a "piecemeal" approach.

a. A "piecemeal" approach is where engineering completes a design, then hands the design to contracting for advertisement, who hands the contract to construction (with little or no more engineering involvement after award), and is not practical to use in the design-build process.

b. A "corporate" approach needs to be followed. The design agency should establish or assign a management group to guide the project execution from the design directive stage through construction completion. The design agency's management group should consist of representatives from key organizational elements. A typical management group member should come from project management, engineering, construction, contracting, counsel, real estate, and others as deemed appropriate to the process and design agency's organizational structure.

c. The design agency should develop and implement formal procedures for determining the most appropriate acquisition strategy and management plan for a construction project. The procedures should include consideration of "Design-Build." This process involves design agency designated representatives from Program Management, Construction Division, Engineering Division, Contracting, Counsel, Real Estate Division, and the using activity (Installation) to examine key features and requirements peculiar for a project and select an acquisition strategy and initiate a project management plan for that project.

2. **THE BASIC PROCESS.**

a. Design-build is accomplished in six basic phases, which are depicted in figure 2-1 below and are explained in detail in later chapters; viz., Acquisition Planning, Predesign Activities, Develop RFP, Issue RFP, Evaluate Proposals & Award Contract, and Administer Awarded Contract. All of the activities in the design-build process involve teamwork, where four basic teams and sometimes a source selection board perform specific roles throughout the project's development and execution. The roles of the teams are discussed below and in detail within subsequent chapters in this DBI.

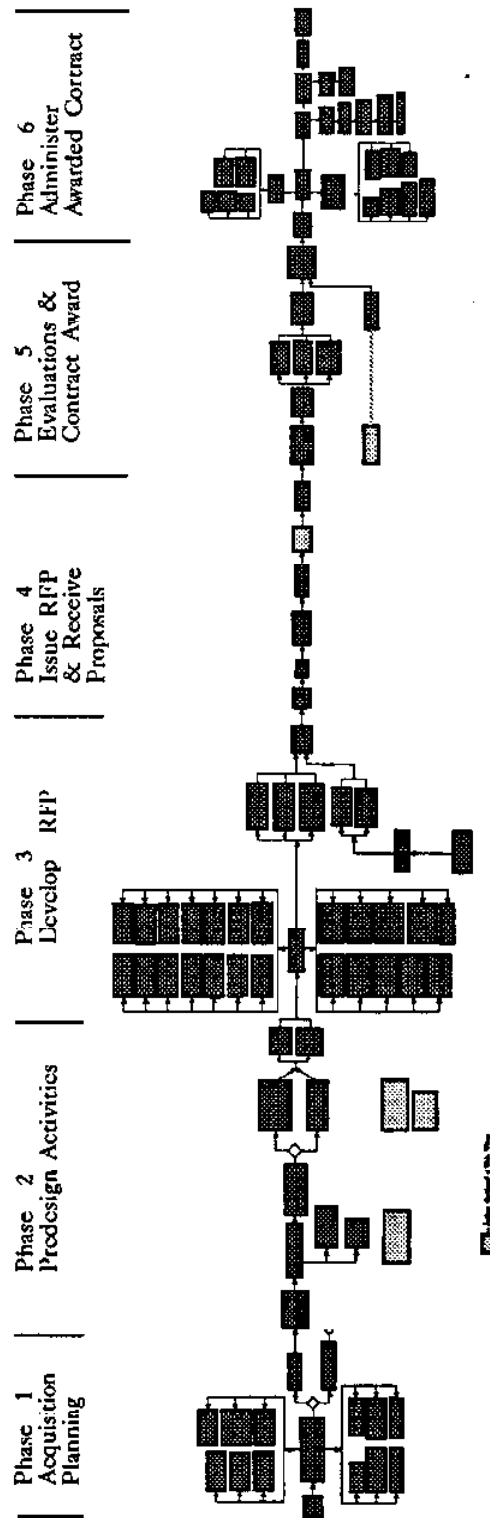


Figure 2-1: Design-Build Process

b. **The Project "Design-Build Management Team"** should be comprised of a representative for technical matters, construction matters, contracting matters, legal matters, cost evaluation matters, an installation representative for functional matters, and the design agency project manager as the lead for overall project management during RFP development and award of contract. Leadership on this team doesn't change when the contract is awarded, however, the intensity and role of the design agency's construction representative increases.

c. **The Design Team** should be comprised of professionals from architecture, engineering, and planning disciplines; design agency's in-house staff or contracted A-E. This team is involved in defining the technical and functional requirements of the RFP, as well as preparing the government estimate for the project. This team also coordinates with the technical evaluation, cost, and the design-build management teams in completing the development of the project's RFP.

d. **The Technical Evaluation Team** should be comprised of professionals from architecture, engineering, and planning disciplines, led by a technical person. Construction and installation representatives are also part of the technical evaluation team. Consultation with contracting and counsel are encouraged to resolve issues with contracting or legal complications.

e. **The Cost Evaluation Team** should be comprised of professionals from cost estimating, management, contracting, and counsel; preferably led by a person from contracting.

f. **The Source Selection Board** (if formal selection procedures are used) is comprised of professionals from management, contracting, and counsel and serve the contracting officer as outlined in FAR 15.612.

g. Value engineering activities are primarily conducted during the RFP development period. However under certain circumstances, value engineering is practicable after the design-build contract is awarded; viz., in the areas where the solicitation and resulting contract have prescriptive specifications and a predetermined design solution. Additional guidance on value engineering in design-build contracts will be issued by Engineering Technical Letter (ETL) and subsequently incorporated into this DBI.

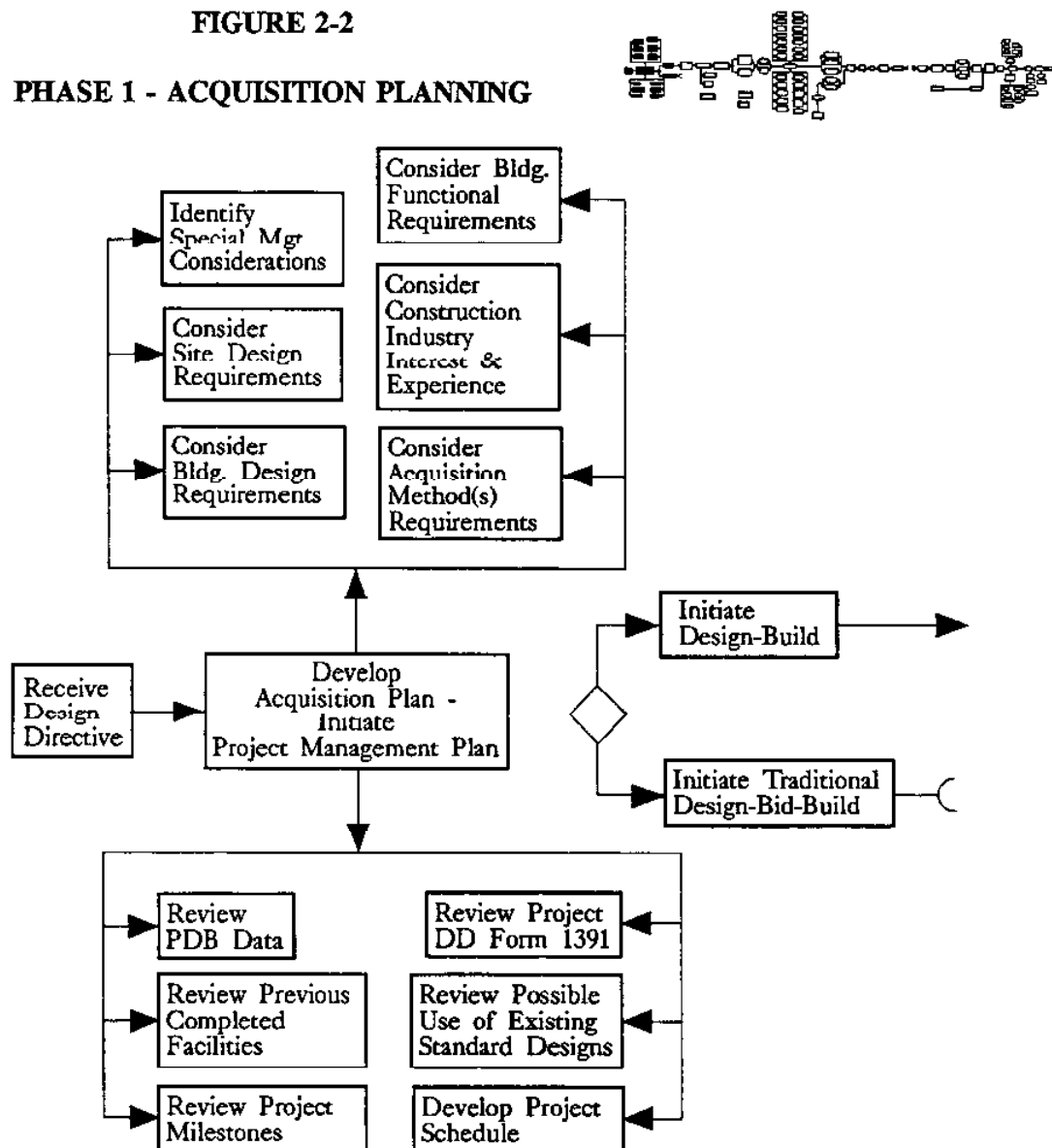
h. During the development of the RFP it is important that the using activity (installation), the design team, the technical evaluation team, and other team members have the maximum opportunity for input. In order to have a successful project, it is imperative to develop an RFP that best defines the project requirements both technically and functionally. After the contract is awarded, changes to the design criteria are processed as change orders and historically are costly in a design-build contract.

i. Once the proposals are received and evaluated a firm-fixed-price contract is awarded. Since a representative from construction is part of the design-build team process, the transition into construction should be smooth. For the most part, construction activities in a "Design-Build" contract are similar to the traditional "design-bid-build" process and are explained in Chapter 6.

3. **PHASE 1 - ACQUISITION PLANNING.** Guidance for determining the project requirements and selecting a procurement approach are outlined in Figure 2-2.

FIGURE 2-2

PHASE 1 - ACQUISITION PLANNING



When HQUSACE issues a design directive, the design agency initiates the development of an acquisition strategy/project management planning process to evaluate possible design and contracting methods that would be suitable for the project, e.g, design-build process. Acquisition strategy planning and project management plan are interdependent; many say they are one-and-the-same. Once the project management plan is established, it will be updated as the project progresses. Appendix A provides guidance on how to research and document the selection of a procurement approach in the acquisition planning process.

a. The acquisition planning considers special project specific goals/objectives such as beneficial occupancy requirements, etc.; site design requirements such as environmental impact assessment, etc; building design requirements (technical) that need special expertise; building functional requirements that need special designer experience; design and construction industry interest and experiences in nontraditional design-build, as well as traditional design-bid-build; and infrastructure capabilities (roads, utilities, water and sewer).

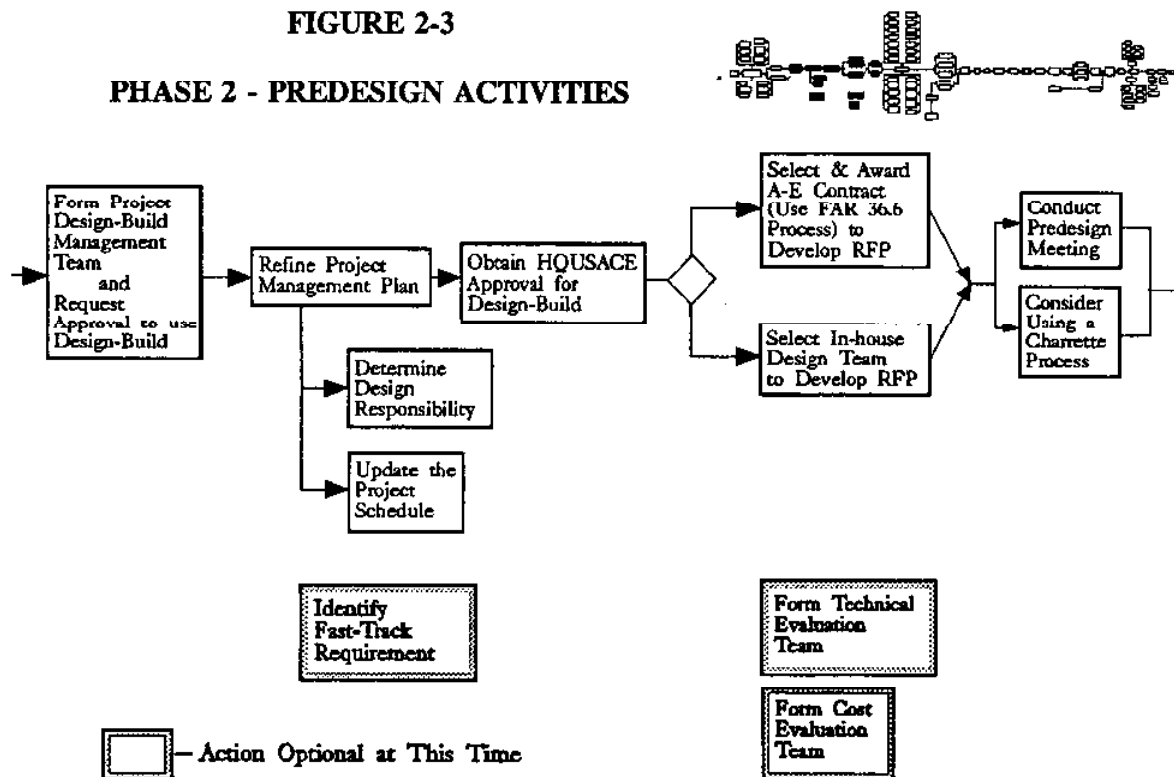
b. The project management planning begins with compiling and analysis of project scope and project data, review of previously completed facilities or standard designs of similar nature, review project milestones, and develop a project schedule (to be continually updated).

c. When the acquisition plan/project management plan indicate(s) that the traditional design-bid-build process is the appropriate procedure for the project, then initiate the traditional process. The remainder of the DBI guidance does not apply, and the design agency should follow their traditional process.

d. When the acquisition planning/project management planning process indicates that the nontraditional "design-build" process is the appropriate procedure for the project, then proceed to Phase 2. ER 1180-3-1 requires an acquisition plan be used in determining the appropriateness of design-build and activities required to obtain approval to used design-build.

4. PHASE 2 - PREDESIGN ACTIVITIES. The design agency identifies a "Design-build Management Team," which evaluates the project scope and requirements; assigns the necessary technical evaluation, cost evaluation, and other teams; and assures a streamlined process is followed to accomplish the design-build project from design through construction completion. When time permits, a presolicitation notice should be published in the Commerce Business Daily (CBD), in accordance with FAR 5.204 and 15.404, indicating the project(s) that will be pursued using a design-build project; this will provide potential offerors time to coordinate design and construction services or develop joint ventures. Figure 2-3 indicates flow in Phase 2-Pre-design Activities.

FIGURE 2-3
PHASE 2 - PREDESIGN ACTIVITIES



a. Once a design agency receives a "design directive" for a project, the process is started to develop the acquisition plan and initiate a project management plan. These activities examine preconcept data (DD Form 1391) and other similar project-descriptive documents, completed designs or standard design availability, and other project requirements and circumstances.

b. As part of the acquisition strategy and management plan process, responses to the public announcement of the design-build project are evaluated, determination of the in-house design capability and schedules are accomplished, and then a decision is made whether to develop the RFP in-house or by A-E contract.

(1) When an in-house design process is decided for development of the RFP, the team should be established with professionals knowledgeable of the facility's requirements, and the design build process.

(2) When an A-E contract is decided for development of the RFP, selection and award must follow the process in FAR subpart 36.6. Depending on circumstances at the design agency, the RFP can be developed by an A-E firm under a delivery order contract so long as the A-E is knowledgeable about the facility's requirements, and the design-build process.

(3) The technical review of the RFP should be conducted by an in-house design review group established with professionals knowledgeable about the facility's requirements, and the design-build process. Furthermore, when the RFP is developed by an in-house design team, the technical review of the RFP must be made by professional personnel other than those on the in-house design team.

c. Once the determination has been made, to prepare the RFP, for either in-house design or contracted A-E design services, the project schedule, which is a living document that will be continually updated, should be developed.

d. Simultaneous to, or during the project schedule development activities, activities such as predesign meetings and possibly a design charrette process should be conducted. This process must include the user ("customer"), designers, and project management.

5. PHASE 3 - DEVELOP RFP. The A-E or design agency's design team assembles project requirements and prepares the technical performance specifications for the RFP, technical evaluation criteria, and the other activities required to compile a completed RFP. Additional discussions on the development of the RFP are depicted in figure 3-1 and subsequent guidance indicated in Chapter 3 of this DBI.

6. PHASE 4 - ISSUE RFP AND RECEIVE PROPOSALS. The design agency issues the RFP, and proposals are received from offerors. Figure 4-1 depicts the design agency's actions including the points where interaction occurs between offerors' professionals, the design agency teams, and the using activity(s) representatives. Additional narrative explanation is provided in chapter 4 of this DBI.

7. PHASE 5 - EVALUATE PROPOSALS AND AWARD CONTRACT. During this phase, in addition to proposal evaluations, five major activities are completed as indicated in figure 5-1 and discussed in detail in chapter 5 of this DBI.

8. PHASE 6 - ADMINISTER CONTRACT. There are five major activities in this phase to accommodate design completion and construction. These activities are indicated in figures 6-1, 6-2 and 6-3, and discussed in chapter 6.

CHAPTER 3

RFP DEVELOPMENT

1. GENERAL.

a. The guidance in this chapter outlines, to all the team members, the basics that the design agency will follow in developing an RFP for a design-build contract. The project management office in the design agency is the element to be consulted for clarification on implementing these criteria, tailored to the local design-build procedures.

b. The RFP is the preferred method (versus Invitation For Bid (IFB)) for soliciting proposals for design and construction of a facility under one contract. In this process, an offeror makes a proposal responding to the RFP, offering price and technical proposals for accomplishing the design and construction of the project.

c. The RFP will be used by "Design-Build" contractors or joint ventures between construction management firms, franchised building systems contractors, A-Es and general contractors to develop proposals.

d. The RFP also describes the procurement procedures and how they will be implemented. The RFP contains, but is not limited to, price schedules, descriptions of project conditions and site data, performance-oriented technical specifications, project functional requirements (sketches or drawings may be included, architectural design guidance, and evaluation criteria and procedures), and standard solicitation provisions and contract clauses.

e. The RFP should be in a easy to handle form, i.e., if practicable on metric sheets A4 (210 by 297 mm) bound format (8-1/2 by 11 inch where metric sheets aren't available). Schematic or sketch graphic material should also be in the A4 bound format when practical, but on larger sheets when necessary to ensure schematic and sketch plans are readable.

2. RFP DEVELOPMENT. There are three basic steps to the development of a design-build RFP: develop a draft, review and comment on the draft, and complete the RFP by revising the draft based on the review comments. Procedural requirements for engineering and construction in a design-build contract differ greatly from a traditional construction contract, especially since design is a substantial part in the construction part of the contract, and the technical aspects of the proposals and subsequent design are begin with the RFP.

a. Develop an RFP Concept Narrative. A narrative description of the project and the design-build process should be included in the RFP. Figure 3-1 above, and the discussions below indicate typical elements that need to be in narrative form in the RFP.

(1) Describe the design-build process and explain its purpose and indicate that the construction contract will be awarded based on a price/quality and not on low price alone. The quality is determined and is a basis for contract award by using evaluation factors. These evaluation factors must be clearly stated in the RFP. It is important to state which evaluation factors will be used in selecting/awarding the contract, i.e., list the factors in order of importance without disclosing exact numerical value of importance.

(2) Indicate tentative dates or blocks of time anticipated for the major steps of the procurement. Further instructions on post-contract submittals, review times, fast-track provisions, and similar items should be included.

(3) Briefly describe the content and organization of the RFP and tell how an offeror is to use the document. Indicate that the RFP presents minimum acceptable criteria and that proposals having higher quality features will be scored accordingly. (Criteria and requirements in the RFP are the basis for evaluation and award in the design-build contract.)

(4) Clearly describe the offeror's latitudes and constraints. Indicate those items to which an offeror must strictly adhere as specified and those for which the offeror may exercise flexibility in developing the proposal.

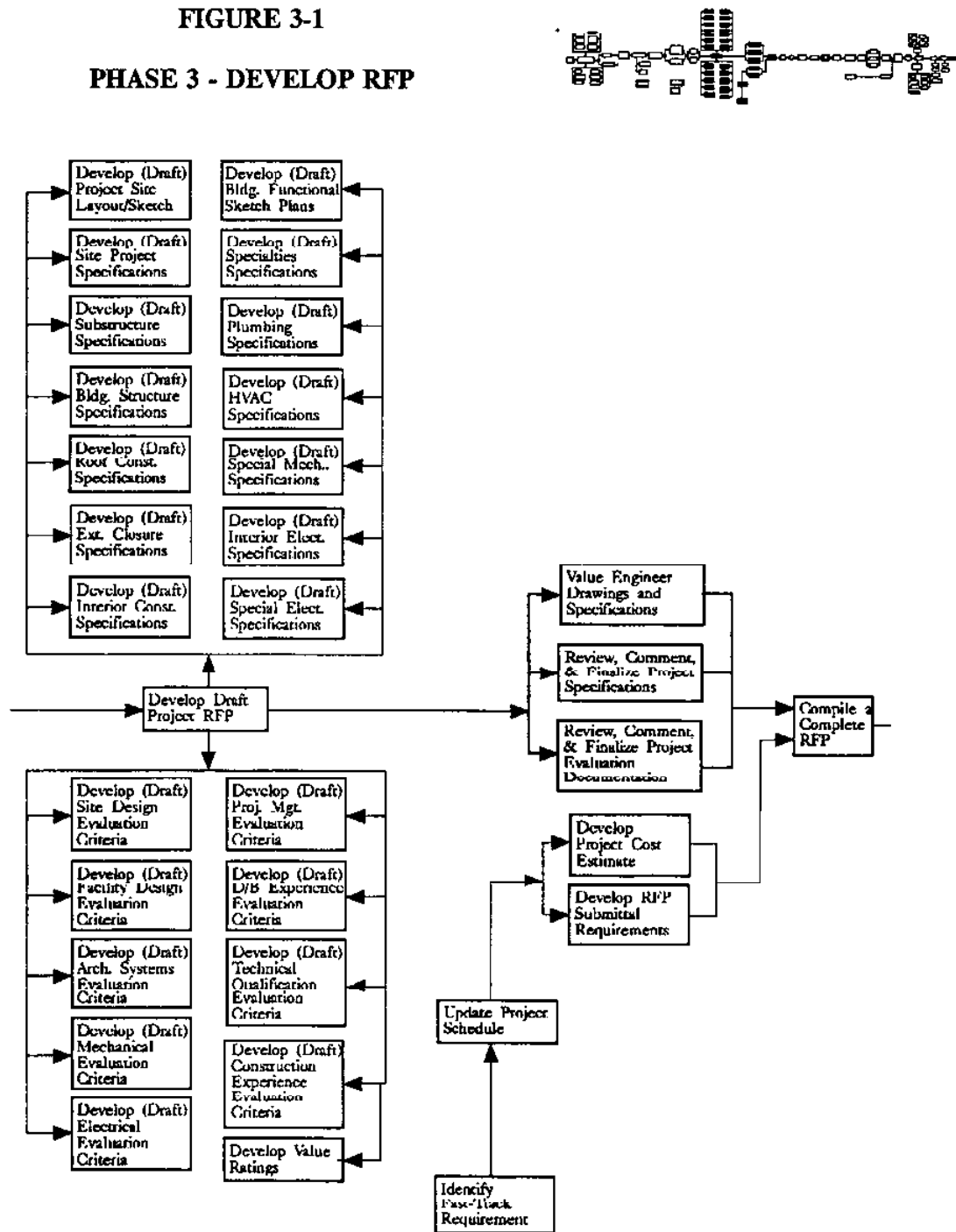
(5) Inquiries and Clarifications of RFP Provisions. Include points of contact for both contracting issues and technical issues. Maintain a file of inquiries and clarifications, and issue them to all potential offerors.

(6) The RFP may include a checklist of submittal requirements. Proposal submittal requirements must not be too extensive; this would cause unnecessary cost and time burden for offerors to prepare an offer (design and estimate). Identify factors on which evaluation will be based, and develop the submittal requirements around those evaluation factors.

(7) Require information demonstrating that design and engineering personnel involved in the design development are qualified, and properly certified or registered in their profession. (Similar information is usually required for the construction contractor side of a design-build contract.)

b. Compile Basis for Design. The basic functional, technical, and other project requirements are compiled into a narrative "Basis for Design." When the functional and technical requirements are identified correctly, a sound foundation is created for the project development. The initial activity is to prepare a draft RFP that is based on functional requirements, technical requirements, and other factors. The actions to develop a draft RFP are outlined in figure 3-1.

FIGURE 3-1
PHASE 3 - DEVELOP RFP



c. Prepare Project Specifications. The RFP specifications are performance-oriented; not "wide open" to any design, construction type, or materials without controls for adequacy and quality to allow a variety of construction solutions. Describe the use of performance criteria and the basis on which the criteria were developed. Reference applicable industry standards, model building codes, and definitive USACE criteria such as Corps of Engineers Guide Specifications (CEGS). Where USACE criteria must be used, provide the criteria in the RFP extracted from the TM, CEGS, etc. Appendix B, Developing Performance Specifications, outlines aspects of, and decision process that need to be addressed in the RFP specifications.

d. Develop Evaluation Factors. Evaluation Criteria should describe major evaluation factors, major subfactors, and indicate their relative importance (including the relative importance of technical and price factors) per FAR 15.406-5(c) and 15.605(e). Chapter 5, Appendix C and Table C 1 provide guidance and Example Technical Evaluation Criteria that may be used as a checklist to develop project specific technical evaluation criteria. Key points to remember are:

(1) Evaluation factors should be well defined and limited to those items determined necessary to achieve the quality and performance of the project. Remember, each evaluation factor may cause offerors to design the project, irrespective of the RFP stated submittal requirements, to a level they (the offerors) feel necessary to compete for the best evaluation.

(2) Major subfactors and their relative importance to major factors should also be described in the RFP. This information can be included as ordinal rankings, percentages, or other means to convey the relative importance of the factors and subfactors.

(3) When subfactors and their importance are included in the RFP, the advantage to the Government and offerors is a better awareness and understanding of the factors important to the project. With this information, the Government can better explain what is important.

e. Develop Cost Estimate. A concept level design cost estimate should be developed for the project. While the project may not be at the normal 35 percent design level, cost experience with similar facilities along with any project specific cost may be used to accomplish the cost estimate. Estimate cost on a systems basis, using the most feasible construction types likely to be proposed. The Corps of Engineers Micro Computer-Aided Cost Estimating System (MCACES) should be used. The government estimate should be closely held (for official use only) in accordance with the design agency's procedures.

f. Develop Submittal Requirements. Examples of proposal submittal requirements are provided at Appendix D of this DBI. They may be freely adopted as appropriate for the particular project.

3. REVIEW RFP, COMMENT AND COMPLETION. The design agency project manager provides copies of the draft RFP to the using agency representative(s) and others as established by the design agency management team (technical and nontechnical staff) for review and comment. The overall RFP basis for design, as well as the RFP narrative, specifications, evaluation documentation, submittal requirements and updated project schedule are compiled into "the RFP" after the review comments are assembled and appropriate comments are incorporated into the RFP in a similar manner to a conventional design.

a. Review commentary should be kept in the context of a performance-oriented specifications. Avoid definitive indications of materials or configurations as this limits creativity and use of innovative materials and methods of construction. Notwithstanding, layouts, materials and methods critical to the facility function should be indicated in the RFP.

b. Conduct prefinal and final reviews and back-checks as customary with the design agency.

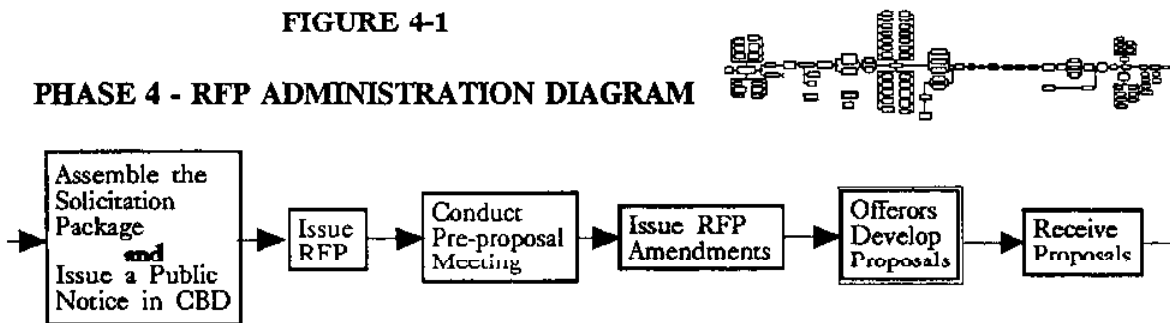
CHAPTER 4

ISSUE RFP and RECEIVE PROPOSALS

1. **GENERAL.** The administration of the RFP through receipt of proposals is not new to personnel in the project management and contracting offices. However, other team members need to be familiar with this process. Therefore, the detail of guidance in this chapter outlines to all the team members the basics on which the design agency conducts this activity in six major activities as discussed in chapter 2 of this DBI. The diagram provided in figure 4-1 outlines the six major activities and is followed by brief explanations of each activity.

FIGURE 4-1

PHASE 4 - RFP ADMINISTRATION DIAGRAM



2. ISSUE PUBLIC NOTIFICATION.

a. Time permitting, a CBD may be used as a means to advertise that a project is available for design and construction. When time permits, a presolicitation notice in the CBD announcement may include a brief description of the project and design-build procurement, projected timetable for advertisement, proposal, award, and design agency points of contact.

b. Place a CBD announcement as normally done for the construction portion of a traditional design-bid-build construction bid package.

(1) Indicate where to obtain the RFP.

(2) Indicate the nature of the design-build project and necessity for offerors to provide both design and construction services.

(3) Indicate the basis for award of the design-build contract. Include a date and place for a preproposal meeting and list both administrative and technical points of contact.

3. **ISSUE RFP.** Perform the administrative procedures that are normally followed on an advertised project; provide RFP to offerors, record who obtains RFP copies, etc.

4. **CONDUCT PRE-PROPOSAL MEETING(S).** A pre-proposal meeting may be conducted, and should occur within the first one-third of the proposal period with all potential offerors who have obtained a RFP. Allow enough time for offerors to receive and review the RFP, but schedule the meeting early enough to be of use when offerors are developing proposals. Subsequent pre-proposal meetings can be held as necessary.

a. The pre-proposal meeting is a good forum to explain the design-build process and discuss any procedural, technical or functional issues. This is the prospective offerors' first opportunity to clarify their vision, and functional and technical requirements of the project with the design agency and using agency team members.

b. In order to facilitate responses to offerors' questions, the design agency may request submittal of questions in advance of pre-proposal meetings.

c. The design agency should monitor the flow of information, provide equal availability of critical information, and avoid preferential information.

(1) Information sources must be consistently presented; discussing objectives or intent only, not "tips" on design solutions.

(2) Minutes of the preproposal meeting should be distributed to all RFP holders.

(3) The contracting officer should ascertain, depending on project conditions, what the most reasonable approach to information exchange should be (e.g., convene more meetings, direct inquiries to appropriate offices). The objectives are inform all offerors get the same information and to avoid the possibility of misinterpretation of the design requirements between the Government and the offerors.

5. **ISSUE RFP AMENDMENTS.** When amendments are made to the RFP they are issued to the potential offerors that received RFP packages. Amendments are accomplished in similar fashion as in a conventional construction bid package. Issue amendments as soon as possible so that offerors have enough time to adjust their proposals. This timing is especially critical for amendments related to major project requirements (e.g., the scope or inclusion of additional requirements) and proposal time. If time extensions are appropriate, the design agency should resolve whether to extend proposal time.

6. **DEVELOP PROPOSALS.** The potential offerors (firms) that have obtained the project RFP prepare their proposals.

7. RECEIVE PROPOSALS.

a. The RFP should indicate the contracting office in the design agency as the point of contact for contractors who have questions regarding the RFP and for receipt of proposals. In the event that questions arising during the proposal period indicate an error in the RFP or identify any point on which there could be a serious misunderstanding by offerors, a formal amendment clarifying this point must be issued to all holders of proposal packages.

b. The contracting office representative should serve as the lead in the Cost Evaluation Team as well as the lead in the following:

(1) Recording the receipt of each proposal.

(2) Separating the material intended for technical evaluation and ensuring that all evidence of offeror identity is removed from this material.

(3) Transmitting the technical material including offeror qualification and management material to the technical evaluation team, and cost proposal to the cost evaluation team.

CHAPTER 5

EVALUATE PROPOSALS AND AWARD CONTRACT

1. GENERAL.

a. The evaluation of offers and award of a competitive negotiated contract are not new to personnel in design agency contracting offices. However, other team members need to be familiar with this process. Therefore, the detail of guidance in this chapter outlines to all the team members on the basics where the design agency conducts evaluations of proposals and other activities to award a design-build contract. The contracting office in the design agency is the lead in this phase, and construction division representation is important. Team members should consult with the contracting member of the team for clarification on implementing these criteria and procedures.

b. The process for evaluations and contract award is critical to achieving a successful design-build project. In this process, the proposal determined to be most advantageous to the Government is identified and recommended for contract award. The evaluation process:

(1) Rates the technical performance and price of proposals, and forms the basis for recommendation of contract award.

(2) Must be organized systematically for timely execution and must be detailed enough to judge technical performance and qualities of proposals.

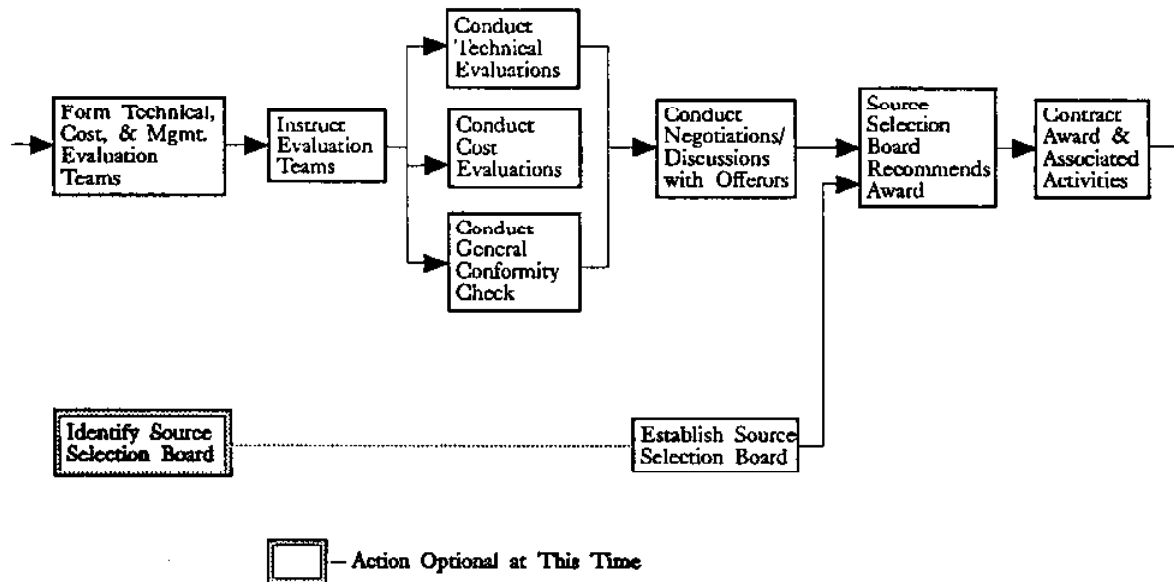
(3) Must be executed objectively and consistently to ensure fairness to all offerors.

(4) Must be justifiable with regard to procurement regulations.

c. Evaluation documents are assembled into plans or booklets to promote a systematic and consistent examination of proposals. Evaluation documents provide the basis and reference for documenting that the award is properly made and in the debriefing process. Evaluation documents are solely for the use by the design agency's design, review and evaluation teams, and approval authorities.

FIGURE 5-1

PHASE 5 - EVALUATE PROPOSALS & AWARD CONTRACT



2. FORM EVALUATION TEAMS.

a. General.

(1) Personnel from the design agency's construction, counsel, contracting, and engineering, as well as representatives from the installation Directorate for Public Works (DPW), and using agency should be involved in the proposal evaluation phase of the project.

(2) When offerors' qualifications or management plans are to be evaluated, the Resident Office or Area Office responsible for executing the contract should also participate on the evaluation team. When offeror's qualifications and management plan are critically important, two teams may be used; one for technical qualification evaluations and another for management plan evaluations.

(3) Evaluation personnel should be identified and their participation confirmed, preferably at the end of the RFP development, but well in advance of receiving proposals.

b. The Design-Build Management Team should determine the level of, and types of evaluation teams that will be necessary for the project. Various types of evaluation teams are required and their different requirements are discussed below.

c. Technical Evaluation Team.

(1) This team should be composed of architects and engineers representing each design and technical discipline appropriate for the specific project, construction, contracting, and a representative from the installation's DPW and the using agency. Of course other technical evaluation team members should be appointed depending on the needs to adequately perform a project's technical evaluation, e.g., real estate or environmental. Evaluation team personnel should be required to meet a minimum experience qualification level as determined by the design agency.

(2) When the RFP is prepared by an A-E under contract with the design agency, personnel from that office may prepare analyses to contribute to the offeror qualification evaluations.

(3) All team personnel must be familiar with the RFP requirements in their respective technical disciplines.

d. Management Evaluation Teams. When Offerors' qualifications and management plans are to be evaluated separately, an offeror qualification team should be composed of members different from those on the technical evaluation team. The reasons are two-fold:

(1) offeror's qualification material will contain the identity of the offerors, which should not be divulged to the technical evaluators.

(2) design personnel are generally less familiar with construction contractors and construction management issues, as are construction personnel with design.

(3) The technical evaluation team and the qualification evaluation team should not jointly discuss proposals. The teams should consist of representatives from the design agency, resident or area office, DPW and using agency. When the RFP is prepared by an A-E contract, personnel from that A-E office may prepare analyses to contribute to the qualification evaluations.

e. Cost Evaluation Team. This team performs cost and price analysis in accordance with FAR Subpart 15.8; price is not scored.

f. Source Selection Board. If formal source selection procedures are to be used (FAR 15.612), the source selection consists of an evaluation board, advisory council, and

designated source selection authority at a management level above that of the contracting officer. The source selection authority need not be a warranted contracting officer. Typically, Chiefs of Engineering and/or Construction Divisions, the contract specialist, and a representative from the Office of Counsel would be members of the advisory council.

3. INSTRUCT EVALUATION TEAMS.

a. General. The instruction of evaluation teams has three basic activities; prepare instruction documentation for the specific project; prepare technical, quality rating, and evaluation summary forms, and conduct a preevaluation meeting. Instructions should be prepared for the evaluation teams and provided to each team member in a booklet or manual form. The instructions should include, but not be limited to the following material:

- (1) A brief description of the evaluation process.
- (2) An explanation that the proposal material, evaluation proceedings, and evaluation results are confidential and shall not be disclosed outside the evaluation team.
- (3) A description of the major evaluation factors/subfactors and the relative weight placed on each for this project.
- (4) An explanation of the quality value rating scoring scheme and instructions for rating proposals.
- (5) Instructions for using the forms and keeping the documentation.
- (6) Logistical information such as time and place of the evaluation.

b. Preevaluation Meeting. The Design-Build Management Team, led by the contracting representative, should convene a meeting of the various evaluation teams prior to initiating the evaluation processes with the personnel to be involved. This meeting should:

- (1) Summarize the purpose, objectives, and the distinct steps of each evaluation.
- (2) Review the evaluation criteria documents or manual.
- (3) Review the evaluation procedures and evaluation team's responsibilities.
- (4) Clarify the confidentiality of evaluation procedures and results.
- (5) Discuss logistics of the evaluation.

4. CONDUCT EVALUATIONS.

a. General. The evaluation process should involve functional experts (for example, specialists in fire protection, security and protective structures, costs analysts, and environmental engineering), and strictly follow the criteria established for the specific project. This helps to assure that evaluations are fair, impartial, and objective.

b. Technical Evaluation. Upon receipt of the proposals, the contracting office should provide the technical proposals to the technical evaluation team(s) and the evaluations will be conducted in accordance with the project's established "evaluation criteria" and procedures. Proposals provided to the technical evaluation team will not contain price data or offeror identity. Normally, each proposal is assigned a unique number.

(1) Proposals must be evaluated individually and not initially compared with the other proposals. The technical evaluation team completes an evaluation for each proposal, usually ending with a rating in the form of an technical point score for each proposal. Typically, each member of an evaluation team will review and score each proposal. However, the team's final evaluation of each proposal must be a consensus, arrived at by mutual agreement and not by simply averaging team members' scores. Major differences between evaluators must be resolved in developing a consensus. For example, if one evaluator downgrades a proposal as having a technically unacceptable approach to a particular problem (like fire protection), but other evaluators do not, then the team must reach a consensus on whether that approach is acceptable. The team should also determine a consensus on the quality of each proposal in comparison to each of the other proposals. Scores should be generated by consensus of all evaluators rather than by simply averaging or mathematical manipulation.

(2) No price proposal data or offeror identification (except the assigned number) should appear in the technical proposals. However, the offeror's identity may be included in the proposed Management Plan.

c. Cost Evaluation. The cost evaluation team performs cost and price analysis in accordance with FAR section 15.805.

5. COST-TECHNICAL TRADE-OFF. "Cost-Technical Trade-Off" is where proposal technical evaluations and scores are compared to proposal prices. If discussions will be held, a "competitive range" of the offers having a reasonable chance of selection is established. Offers determined not to be in the competitive range are notified in writing and excluded from further consideration.

6. CONDUCT NEGOTIATIONS/DISCUSSIONS WITH OFFERORS. A contract can be awarded on the basis of initial proposals without discussions if the RFP so states in accordance with FAR 15.407(d)(4) and 52.215-16, and no issues are unresolved. It is almost inconceivable that the government will not get a better project by conducting negotiations. Negotiations are held with all offerors in the competitive range. Negotiations are concluded by requesting a best and final offer. Preproposal evaluation and Cost-Technical Trade-Off are performed again, after the best and final offer (BAFO).

7. SELECT CONTRACTOR AND CONTRACT AWARD. When the evaluation is finished, a recommendation is made for contract award to the contracting officer, or (if formal source selection procedures are used) to the selection board.

8. CONTRACT AWARD ACTIVITIES.

a. Approval to Award Contract. Approval for the "Design-Build" negotiated contract award is obtained in the same method(s) as the conventional MCA contracts. Approval can be sought upon selection of a successful offeror. However, to save time, approval may be requested in advance of a offeror's selection once the design agency is confident that an award can be made.

b. Design-Build Contract Award. Upon successful completion of the preaward survey, a firm fixed-price design-build contract is awarded in the same way as for a conventional MCA project.

c. Post Award Activities. The design agency should place a notice of contract award in CBD as would be done for a conventional MCA project. The design agency should advise the other offerors that a debriefing can be scheduled.

d. Debriefing Offerors. For team members not familiar with debriefing of offerors the following discussion is provided:

(1) When a contract is awarded under a request for proposals, unsuccessful offerors are entitled to be debriefed. Debriefing are held after contract award and conducted in accordance with FAR 15.1003. The primary purpose of a debriefing is to assure unsuccessful offerors that their proposals were given due consideration, and evaluated fairly and objectively. The evaluation process should be explained.

(2) Debriefing Information. The design agency should approach a debriefing as a constructive, mutually beneficial step in the "Design-Build" project. The objective is to make unsuccessful offerors comfortable with the results and encourage them to both participate and be more competitive in subsequent "Design-Build" projects.

(3) Debriefings must be directed solely towards an offeror's own proposal. Any comparisons with other proposals must be avoided. Proposal deficiencies should be identified. Areas in which a proposal was only marginally acceptable or worked to disadvantage may be discussed. Major strengths of a proposal may also be described. Contracting and counsel will advise what information may be disclosed in debriefings. The contract award and amount is available as public information.

(4) Debriefing should be arranged as soon as reasonable after award. Debriefings are normally conducted at the design agency. A debriefing should involve an individual offeror and may not be a "collective" debriefing. All debriefings can be held within a relatively short time-frame for the design agency's convenience. However they should be scheduled to allow a comfortable amount of time between the appearance of offerors.

(5) The design agency should also solicit feedback from the offeror on the project and "Design-Build" process. Discussions could include items such as design/technical requirements and criteria, proposal submittal material, proposal development effort, and the procurement schedule. Information from the offerors can be instrumental in refining requirements or procedures for future "Design-Build" projects.

(6) The design agency can also profit from feedback on possible revisions and refinements in procedures for conducting subsequent "Design-Build" projects. The design agency should be receptive to and encourage constructive feedback from offerors.

(7) A summary of each debriefing must be included in the contract file.

CHAPTER 6

ADMINISTER AWARDED CONTRACT

1. GENERAL. Design takes place before and sometimes during construction activities in a "Design-Build" contract. Many of the construction administration activities are similar to those in a traditional "Design-Bid-Build" process. The roles of the design agency's construction division are indicated in this chapter.

a. The Design Agency Construction Division Representation. A representative from construction division should participate as a member of the "Design-Build Management Team" in the project development beginning with Phase 1, Acquisition Planning, through Phase 6, construction. The other roles of construction division personnel as a member of various teams from phase to phase will vary as follows:

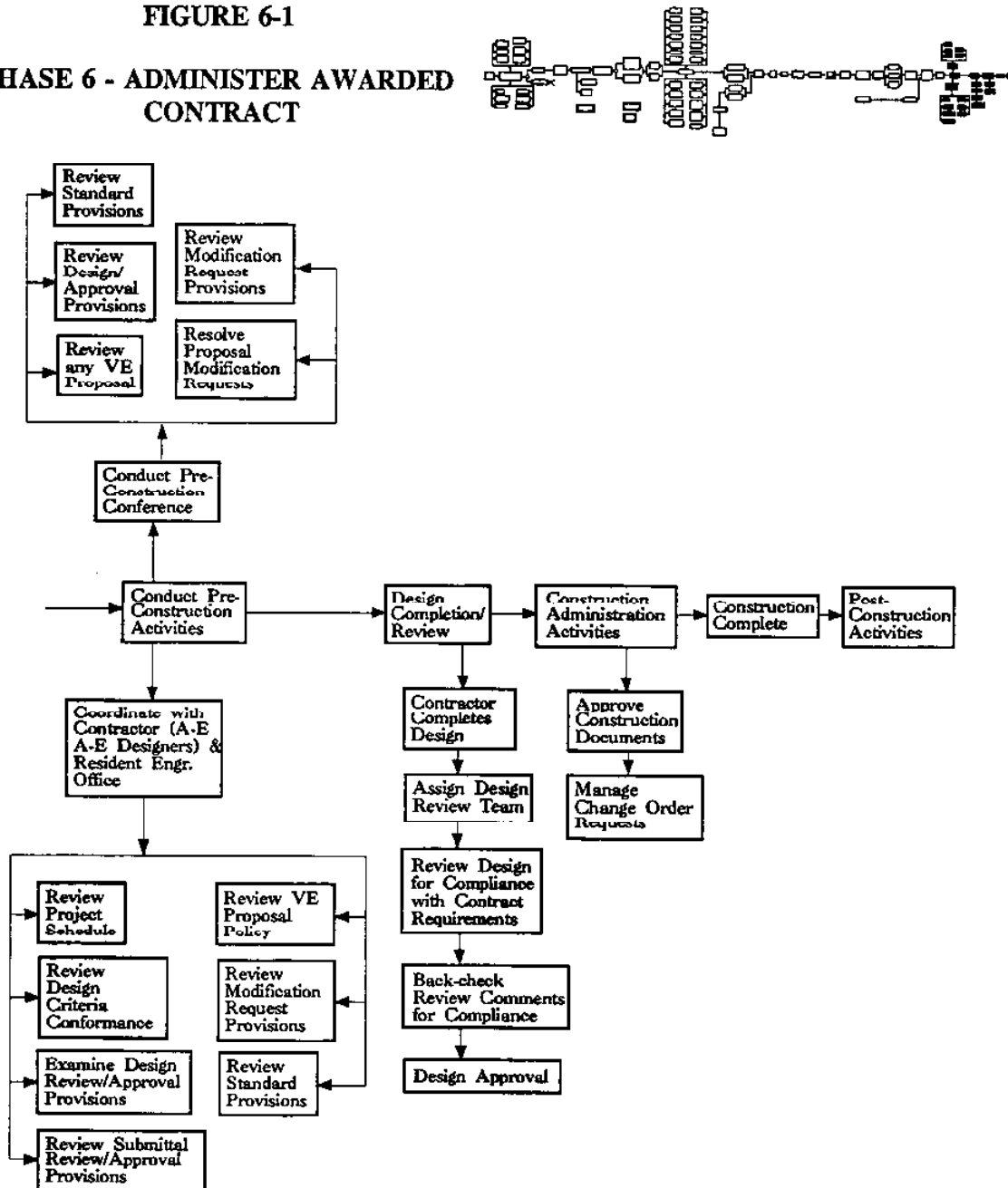
- (1) Participate in decisions on project schedules and overall direction; led by the project management team member.
- (2) Participate in the review of the RFP as it is developed, and participate in "Technical Evaluation Team" activities; led by the engineering team member.
- (3) Participate in the contract award activities; led by the contracting team member.
- (4) Lead the construction activities in Phase 6.

b. Construction Representation During RFP Development. Design agency construction representative(s) are not the lead in Phases 1 through 5, but their participation in those phases is extremely important. Many problems that may occur after contract award may be generated during the RFP development. Therefore, construction representation in Phases 1 through 5 is primarily to:

- (1) Ensure that project schedules are realistic; especially in the construction period schedule, design submittal(s) schedule and design review portions of Phase 6. The involvement builds a knowledge of the RFP and provides an opportunity to improve the content of the RFP.
- (2) Interact with the "Design Team" and the "Technical Evaluation Team" in the development of the RFP; becoming familiar with the reviewers of the design during Phase 6.
- (3) Utilize the close team relationships created during the RFP development to be better prepared for the contract administration of the design-build contract.

2. **CONSTRUCTION ACTIVITIES AND ADMINISTRATION.** Activities to administer the contract are similar to the traditional design-bid-build process. Figure 6-1 addresses construction activities to administer the "Design-Build" contract.

FIGURE 6-1
PHASE 6 - ADMINISTER AWARDED CONTRACT



a. Preconstruction Conference. The Resident Engineer managing the project needs to become familiar with the technical aspects of the project, as well as coordinating key contract procedures with the contractor. This is the point where the participation of design agency construction representatives in the RFP development will pay off. Since the contractor will be submitting design documents for review; a conference should be held where the "Design-Build Management Team" together with the resident engineer staff review and discuss activities that will take place during construction, and ensure a consensus of how the team will function relative to:

- (1) the standard provisions of the contract,
- (2) the design review process and approval provisions,
- (3) reviewing contractor or government contract modification requests,
- (4) the review of Value Engineering (VE) proposals.

b. Coordination by the Construction Representative(s). Coordination with Contractor's A-E designers and other participating design agency staff is achieved in a preconstruction conference with the contractor. The primary activities at this time are to review and confirm the many aspects of how the project will progress. The Administrative Contracting Officer (ACO) ensures that these activities are clarified and understood.

(1) Confirm the project schedule. The project schedule is initiated at the beginning of the project development at the acquisition planning stage (Phase 1). However, the project schedule is continually reviewed and revised throughout the project's life.

(2) Confirm contract design criteria. This is where questions about the design criteria requirements and other technical requirements of the contract are clarified between the government and the contractor. [Note: All questions should have been resolved before the proposals were submitted.]

(3) Confirm standard provisions. The contractor may have questions relating to standard provisions in the contract.

(4) Confirm design review/approval provisions. (This facilitates a clear understanding of the extent of the government's review during the contract.) The contractor is responsible for the design, review, and activities relating to construction.

(5) Confirm submittal review/approval provisions. In similar fashion to the design review/approval provision discussions, any and all requirements for submittal of samples of materials, shop drawings, catalog cuts, etc., must be confirmed at this point in Phase 6.

(6) Confirm modification request provisions.

(7) Confirm VE proposal policy.

3. DESIGN COMPLETION/REVIEW. Once the preconstruction activities are completed, the contractor will be given a notice to proceed, which may be limited to design. However, when a fast track approach is taken in a design-build project, many of the preconstruction, design, and remaining Phase 6 activities may be realigned from those depicted in this chapter.

a. Design. The contractor begins the design process after being given the design notice to proceed. This differs from a construction notice to proceed in that only design is authorized at this time.

b. Design Review. The design agency's review team, assigned previous to this phase, initiates review of the contractor's submittal for compliance with the contract requirements (stated in the RFP). The design team that prepared the RFP or the technical evaluation team are the best candidates for reviewing the contractor's design. Rather than using just an ACO, some design districts assign a Contracting Officer's Representative (COR) to facilitate the design review and clarifications on technical issues with the contractor. However, when a COR is used, COR activities are always coordinated with the ACO.

c. Back-Check of Design/Submittals. The contractor is provided an opportunity to correct the design to comply with the contract requirements and respond to the "Design Review Team" comments. The "Design Review Team" then conducts a back-check and recommends further corrections or design approval to the ACO (or the COR if one is used).

4. CONSTRUCTION ADMINISTRATION AND POST-CONSTRUCTION

ACTIVITIES. The majority of the activities in this portion of Phase 6 are the same as for any traditional design bid build project.

a. Approve Construction Documents. Once the design submitted by the contractor has been reviewed, changes are made to the design to reflect review comments, a back-check of comments is made by the "Design Review Team" and approval of the design is made, followed by a notice to proceed with construction given to the contractor. If an approval of the design is given by the design/construction agency, the approval should clearly state that the design meets the contract requirements.

b. Manage Change Order Requests.

(1) Change orders should rarely be necessary in a design-build contract because the presumption is that the contract clearly contains the project requirements. User requested

changes may occur in the project. Generally, these changes increase the contract cost more dramatically than when they occur in a traditional project. (Changes usually cause additional contract costs because design and construction are affected, as opposed to just construction costs in traditional project.)

(2) Change orders are processed in similar fashion as in a traditional project except that design and construction for the change are accomplished by the same contractor.

Appendix A

SELECTION OF A DESIGN AND CONSTRUCTION PROCUREMENT APPROACH

1. **GENERAL.** The choice between using a design-bid-build approach or a design-build approach for a construction project is a function of the acquisition planning. The process described in this appendix represents guidance to select a procurement approach for a military construction project. This guidance applies to design agencies initiating acquisition planning for the design and construction of a facility. Initiation of the "Design-Build" process can only be pursued when approved by HQUSACE, as indicated in ER 1180-3-1.

2. **SELECTION FACTORS.** To determine which approach would be most advantageous to the Government for the design and construction of a facility or group of facilities, 15 factors must be considered. They are described below; their relative importance is determined on a case specific basis.

a. **Special Project Goals and Objectives.** Special considerations or factors may be the sole reason for undertaking a project as "Design-Build" are a recommendation by HQUSACE or higher levels of authority that design-build be used; user request for design-build and validated as appropriate; or when a project is moved forward in the funding cycle from an out year to a current fiscal year, and normal lead time for design preparation is not available.

b. **Security.** Requirements for security of the building(s), site(s), and Army installation(s) may affect the project design, cost. The construction industry's ability to provide the required security design, construction, or services under the conditions imposed by security requirements is also a factor.

c. **Building Type.** The type of building(s), building elements, and site elements to be constructed, as well as the similarity with other Army facilities comparable to facilities built in the private construction market are factors.

d. **Repetition of Buildings and Building Elements.** The numbers of buildings and major building elements, as well as the degree to which those buildings are similar or identical need to be evaluated. Consideration also includes the projected numbers of the buildings to be constructed in the future.

e. **Cost of Construction.** The construction cost of the building(s) involved in the project needs to be determined and evaluated; i.e., small projects where there is a significant amount of construction would probably not appeal to local industry.

f. Performance Levels. The quality or level of technical performance required for the Army facility type and the quality and level of performance typical of the private construction market's products and practices need to be evaluated.

g. Understanding of Performance Characteristics. The understanding by both the Army and the private construction market of the functional requirements and technical performance characteristics of the facility (as opposed to the design configuration or material characteristics) need to be considered.

h. Design Criteria, Specifications, and Construction Details. The extent to which national building codes and commercial standards can be used for the facility, or whether standard USACE construction criteria, specifications, and/or details are critical to the project must be considered.

i. Design and Construction Time. The amount of time available for the design, procurement, construction, and occupancy of the building(s) is an important consideration.

j. Existing Specifications and Designs. Previous experience with the facility type and the documentation available from recently completed designs should be evaluated.

k. Site Accessibility. The physical characteristics of the project site and the Army installation, need to be considered in the context of the construction industry's ability to provide the required products and services under those conditions.

l. "Design-Build." Use of performance-based specifications and a firm-fixed-price contract are required by Title 10, USC Section 2862 for a "Design-Build" MCA project.

m. Design Agency Capabilities. The design agency's experience in "Design-Build" procurement, personnel available, and the administrative ability to successfully execute a "Design-Build" project is an important decision factor.

n. Construction Industry Capability and Interest. The extent to which the private construction industry is capable of and interested in participating in a "Design-Build" project, given the project conditions described by all of the above factors.

3. INFORMATION SOURCES. Once the design agency has been given a design directive to initiate a project, the acquisition planning process begins. The design agency is responsible for the development of the acquisition plan. The development of the acquisition plan should be made with involvement of installation staff for the project as a member of the team. The design agency's management team is the best group to decide on the acquisition method to be used based on a variety of information and the 15 factors discussed above. Some user and facility requirements can be identified from the Fiscal Year (FY) Military

Construction Project Data (DD Form 1391), the Program Development Brochure (PDB) (still used but not mandatory any longer) and similar project documentation. Characteristics of the facility type can be identified through previously constructed examples of the facilities with the same or similar building types.

a. DD Form 1391. The overall characteristics of the facility are described in DD Form 1391, item 10, "Description of Proposed Construction."

b. Design data checklist. Documents, such as the Army's PDB or Air Force's RAMP, should be reviewed to determine if there are any unusual architectural, structural, or mechanical requirements that might impact the selection of an approach.

c. Standard Designs. The facility requirement in standard definitive designs packages and completed standard design packages of facilities in the DA Facilities Standardization program will be most useful, especially in the "Design-Build" process.

d. Existing Similar Facilities. The most definitive information about the facility at the predesign phase is documentation from previously constructed facilities of the same building type, and standard designs. This type of documentation will provide a configuration and required quality levels and performance characteristics of the facility. Definitive material needs to be extracted from these facilities, considered as an example only. When DA standard plans are used, close coordination with the Center for Standardization (COS) district will be necessary to determine mandatory features of the design.

e. Familiarity with Local Construction Practices. In addition to the information discussed above, selection of an approach depends on the familiarity and experience of USACE personnel with the local architectural, engineering, and construction environment.

f. Industry Experience and Familiarity. The A-E and construction industry experience and familiarity with the various acquisition processes, i.e., "Design-Build," are important in determining the most appropriate process for a project. Canvassing the professional societies and construction industry organization, or public notification soliciting interest in a process such as a "Design-Build" project are ways to determine interest and experience.

4. THE SELECTION PROCESS.

a. General. The selection process has three basic sequential stages. Figure A-1 shows this three-stage approach.

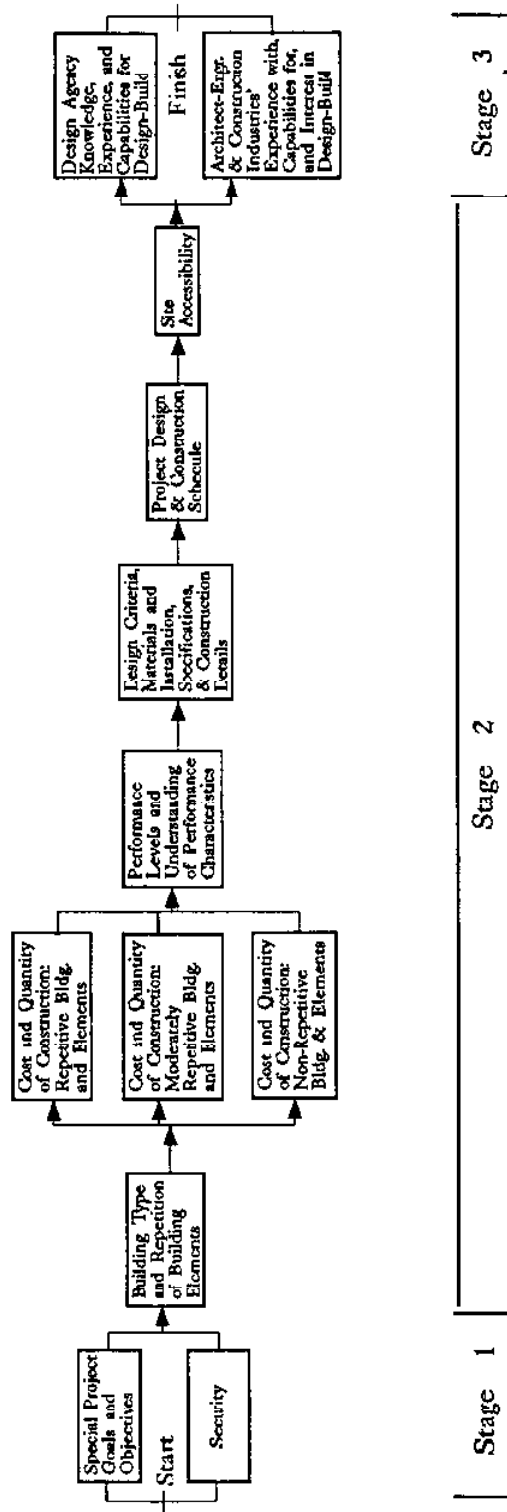


FIGURE A-1 PROCUREMENT APPROACH SELECTION DIAGRAM

(1) In the first stage, special project goals/objectives and security requirements are considered. Examination of these factors may automatically dictate the use of one approach. If not, the rest of the selection process is followed.

(2) The second stage consists of considering six steps in which 12 factors are combined to determine the appropriate approach for a project.

(3) If a "Design-Build" approach is determined appropriate for a project, the third stage considers the ability of the design agency to execute the procurement. Additionally, the interest and ability of the construction industry to respond to the solicitation is to be considered.

b. Special Project Goals and Objectives. Design directives or policies initiated at the HQUSACE, DA, Department of Defense (DoD), or Congressional level may impose special goals and objectives for a project. For example, a specific approach may be directed irrespective of the selection process outlined in this DBI. If no specific approach is designated, consider the impact of the traditional "Design-Bid-Build" and "Design-Build" approaches on the achievement of the special goals, objectives, and project requirements. Listed below are some circumstances that may indicate the appropriateness of a traditional or nontraditional approach:

(1) A requirement related to consideration of alternative construction methods suggests the use of a performance-based procedure is more appropriate than the traditional "Design-Bid-Build" process.

(2) A requirement to implement or demonstrate a specific building technology common throughout the construction industry would suggest the traditional "Design-Bid-Build" approach is more appropriate; especially in the technology involves use of common and proven materials, configurations, practices, and resource availability. In contrast however, a requirement to implement a specific technology for which standard materials, configurations, or construction industry practices do not exist suggests that the performance-based "Design-Build" process is more appropriate.

(3) A requirement to stimulate design or construction innovation, whether materials or method of construction, suggests that the use of a performance-based "Design-Build" process is more appropriate than the traditional approach.

(4) A requirement to rely on private construction market standards, practices, and methods suggests the use of performance-based specifications, "Design-Build" process.

(5) A requirement to minimize construction costs and maximize design and construction efficiencies suggests the use of a "Design-Build" process, but does not preclude the traditional approach. Both processes accommodate these requirements, but "Design-Build" provides a better environment to achieve minimum costs while maximizing design efficiencies. This is especially true when functional requirements and level of performance are well known and common in the private sector.

(6) A requirement to rehabilitate a facility, adaptive/reuse a facility, or historic preservation type projects suggests that the use of the traditional approach more appropriate than the "Design-Build" process. These type of projects often involve as-built situations that would complicate design, require intensive facility studies, and eliminate any design/construction efficiencies normally provided by a "Design-Build" process.

c. **Security.** Determine if there are security requirements of the project that would affect the design and construction of the facility. "Design-Build" projects with special security requirements have been completed. Security requirements alone do not preclude the use of a "Design-Build" process. In cases where a project is mandated to use a nontraditional design/construction approach, RFP development to differentiate design security and contractor security requirements becomes very important to minimize time and risk to both the government and the proposers. Listed below are some security circumstances or requirements that may complicate a project to the point where the design and construction would too be time consuming and too complicated for the "Design-Build" process:

(1) Circumstances surrounding the degree of security required, both facility design security or construction contractor security, may limit the availability of qualified proposers to competitively bid, thereby rendering the traditional "Design-Bid-Build" process more appropriate than the "Design-Build" process.

(2) Security requirements for the installation(s), site(s) and/or building(s) which severely restrict construction access or ability to obtain information and data necessary to design and construct the facilities may complicate the design and construction process to become time consuming and too risky for a fast paced process such as the "Design-Build" process. However, it is possible for the project RFP to be developed in such a way that timeliness and risk are reduced to the point that proposal competition is possible. The design agency and installation should always seek to answer/solve the questions:

(a) Can alternative provisions be made to provide access to the site(s) while maintaining physical security for the remainder of the installation(s)?

(b) Can alternative provisions be made to provide the information and data necessary to design and construct the facilities while maintaining the security of sensitive material? If it is inappropriate to provide sources outside of the Government (i.e., proposers at large), with the information and data needed to design the facility, the traditional approach is suggested. If no single approach is determined to be inappropriate, continue the selection process described below.

d. Building Types and Repetition of Buildings and Elements. Determine the potential for repeating or combining similar building types or major building elements (e.g., rooms, structural systems, mechanical systems) within a single project and over subsequent fiscal years. The potential for repetition and high volume may be more advantageous to a "Design-Build" process, as there will likely be design and construction expertise already present in the local industry to jointly pursue the project. Figure A-2 provides a matrix that indicates selection of traditional or "Design-Build" based on repetitiveness and cost of a facility.

(1) Consider the following:

(a) If the building type or major building elements and design requirements are common within the commercial construction market, then they are repetitive by definition. If construction of this building type is projected for construction in future projects (regionally or in the same installation), the building type or major building elements should also be considered repetitive.

(b) If the building type or major building elements are unique to the Army and not found within commercial construction markets, then these items are nonrepetitive. If, however, a large volume of similar Army facilities is programmed for the near future, there is potential for repetition and the development of expertise in the construction community.

(2) Determine if the building type under consideration is repetitive, moderately repetitive, or not repetitive. Proceed with the selection process according to the appropriate degree of repetitiveness discussed in the three paragraphs below.

e. Cost and Quantity of Repetitive Building Types. Evaluate whether the cost of the buildings indicates the approaches appropriate to the project's cost and quantity of structures when the project is of a repetitive building type; use figure A-2. When only the traditional approach is appropriate no further guidance on "Design-Build" is needed.

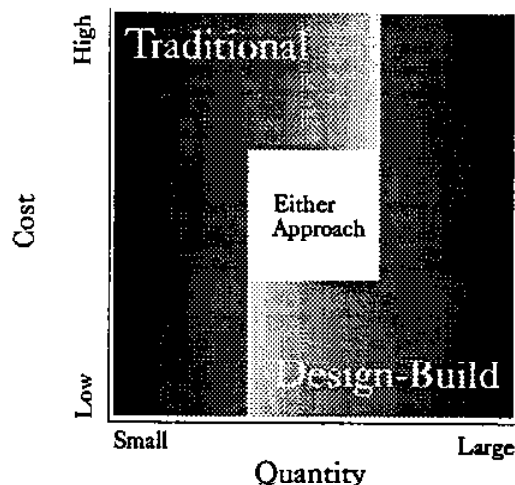


FIGURE A-2 Repetitive vs Cost

f. **Cost and Quantity of Moderately Repetitive Building Types.** Evaluate whether the cost of the buildings is high or low, and whether the quantity, or scope, is large or small. Figure A-3, Moderate Repetitive vs Cost, shows the approaches appropriate to the project's cost and quantity when the project is of a moderately repetitive building type. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. When a "Design-Build" approach is appropriate, continue with the selection process discussed below.

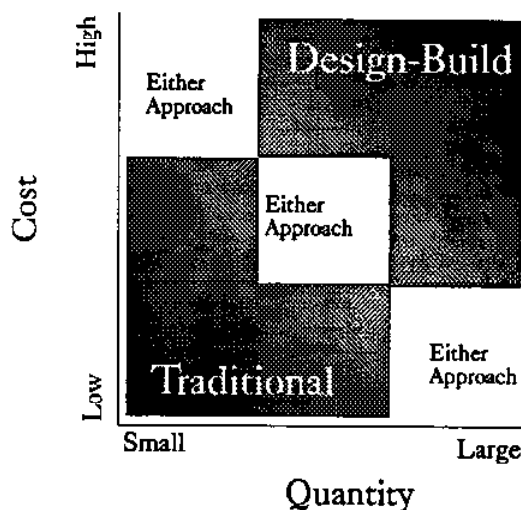


FIGURE A-3 Moderate Repetitive vs Cost

g. Cost and Quantity of Nonrepetitive Building Types. Evaluate whether the cost of the buildings is high or low, and whether the quantity, or scope, is large or small. Figure A-4, Non-Repetitive vs Cost, shows the approaches that are appropriate to the project's cost and quantity when the project is of a nonrepetitive building type. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. Where a "Design-Build" approach is appropriate, continue with the selection process discussed below.

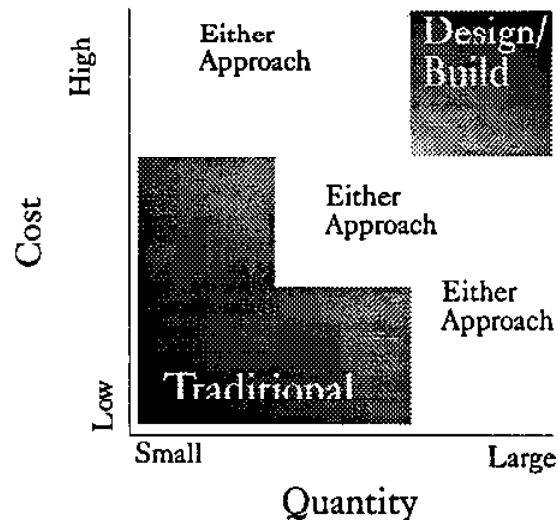


FIGURE A-4 Non-Repetitive vs Cost

h. Performance Levels and Understanding of Performance Characteristics.

Determine the levels of performance required for buildings in the project (e.g., structural conditions, acoustic control, mechanical requirements) and the extent to which the functional and performance requirements of the building type are understood (as opposed to the materials or design characteristics of existing examples of the building type). To this extent, figure A-5, Performance vs Knowledge, provides a graphic method to relate levels of performance requirements compared to the functional characteristics.

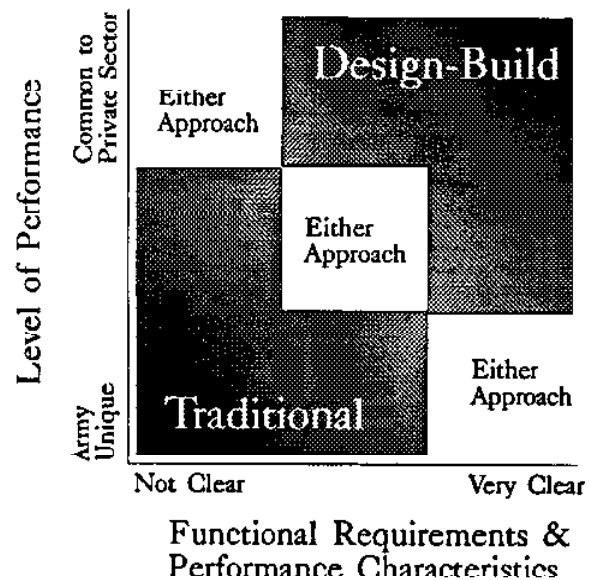


FIGURE A-5 Performance vs Knowledge

(1) Consider the following:

(a) Are the required technical performance levels of the building type unique to the Army? Are the requirements for the Army facility similar to the performance levels of comparable buildings found in the private construction market?

(b) Is there is a clear understanding of the performance requirements and characteristics of the building type by both Army engineers and private design and construction professionals?

(2) Determine if the performance requirements for the building type are unique to the Army or common to the private industry construction market. Assess whether there is an understanding of the building type and whether its performance requirements are very clear or unclear. Figure A-5 shows the approaches appropriate for the project's performance levels. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. When a "Design-Build" approach is appropriate, continue with the selection process discussed below.

i. Design Criteria, Specifications, and Construction Details.

(1) Determine the extent to which locally adopted national building code(s) and design criteria, specifications, and construction details are appropriate for the project.

(2) Determine the extent to which standard Army and USACE design criteria, guide specifications, and details are critical to the function of the building type and must be imposed in the project's design. Either standard USACE design criteria or locally adopted national building code(s) and industry specifications and standards can be used in the "Design-Build" approach. However, a predominance of USACE design criteria and specifications may diminish the willingness of private firms to bid in a "Design-Build" performance-based project.

(3) Determine if the design criteria, specifications, and construction details for the project must be primarily Army-specific or may be locally adopted national building code(s), design criteria and specifications. Figure A-6, Procurement Approach/Design Criteria, matrix shows the approaches appropriate for the design criteria, specifications, and construction details required for the project. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. When a "Design-Build" approach is appropriate, continue with the selection process discussed below.

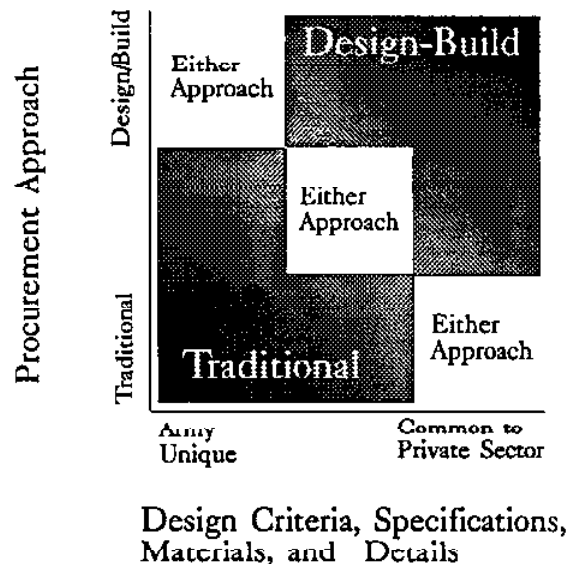


FIGURE A-6 Procurement vs Design Criteria & Specs

j. **Project Design and Construction Schedule.** Determine the design and construction schedule requirements for the project.

(1) Consider the following:

(a) Is there an occupancy milestone that cannot be altered? Is there enough time for design and construction activities, or is there the likelihood of time constraints that may impact the effective execution of the project's design and/or construction due to factors such as design start time, and seasonality of construction activities?

(b) Are existing design and specification documents available for the project and can they be used to expedite design activities (such as traditional construction documents and specifications, performance-based specifications, or an RFP)? Will design and construction documentation have to be developed as original material?

(2) Determine if the project's design and construction schedule is sufficient for the traditional Design-Build approach or imposes severe constraints on traditional design and construction methods. Figure A-7, Project Document Availability vs Project Design & Construction Schedules, matrix shows the approaches appropriate for the project's schedule. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. When a "Design-Build" approach is appropriate, continue with the selection process discussed below.

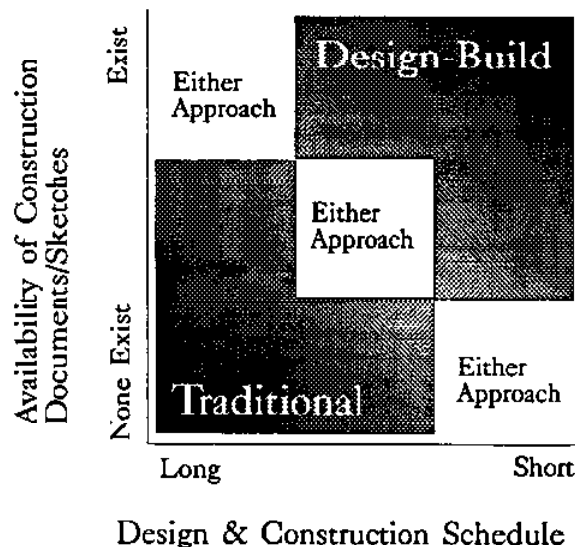


FIGURE A-7 Document Availability vs Design & Construction Schedule

k. Site Accessibility.

(1) Determine the effects of site accessibility on the approach. Consider the following for a building(s) on a single Army installation or for a project involving buildings on more than one installation:

(a) Is the site within an active, competitive construction market in terms of labor, materials supply, fabricators and installers, transportation, and A-E services? Is the site remote in terms of proximity to an active construction market?

(b) Do the physical features of the Army installation and site (e.g., topography, environmental conditions, natural features, utilities) impose extraordinary conditions on design or construction?

(c) For projects involving more than one Army installation, are the sites in relatively close proximity and are they within the general market area of the contractors active within the design agency's geographical jurisdiction? Or, are the sites so dispersed that it would be difficult for a single contractor to operate on all of them?

(2) Evaluate the project's site(s) as not remote, somewhat remote, or isolated. Assess the physical features of the site(s) as ordinary or severe. Only remoteness and physical features that present the most adverse conditions should be considered constraints on construction. Regardless of the approach used, these constraints affect design and construction in the same way. Under the most adverse conditions, the traditional approach will generally be the most appropriate. For a project involving multiple sites, evaluate the sites' proximity as close, moderately close, or dispersed. Only a distribution of sites that extends beyond the normal geographic market of contractors active within the region should be considered as a constraint to the use of a "Design-Build" approach. When only the traditional approach is appropriate, no further guidance on "Design-Build" process is needed. When a "Design-Build" approach is appropriate, continue with the selection process discussed below.

l. Design Agency Capabilities. Having determined that a "Design-Build" approach is appropriate for the project, determine whether the design agency has the ability and expertise to execute the selected type of process. Consider the design agency's previous experience in "Design-Build" process, personnel experience and availability, and the necessary coordination among Engineering Division, Construction Division, and Area or Resident Office activities. Only if the design agency anticipates severe problems in identifying the appropriate management and administrative resources should the "Design-Build" approach be abandoned in favor of the traditional approach.

m. Construction Industry Capability and Interest. Determine the extent to which the local construction industry is capable of and interested in completing design and construction of a project under a "Design-Build" approach.

(1) Consider the following:

(a) Is the private construction market in the area particularly active or inactive? Will design and construction of the project be attractive to the construction industry relative to other construction activity in the region?

(b) Has recent bidding experience been generally favorable for the Government in terms of contractor participation and pricing in construction projects administered by the design agency, or has bid participation and competition been low and pricing high?

(c) Is "Design-Build" construction commonly practiced and evident in the region?

(d) Will the timing of the project's advertisement affect participation in the process? Will seasonal activity in the private construction industry encourage or discourage proposal preparation, design, and construction of the project?

(2) An information exchange or liaison between the design agency and the construction industry should be established to inform the construction industry of the Government's general intentions regarding the initiation of "Design-Build" projects and to evaluate the industry's capabilities and interest. The purpose of this liaison is to ensure adequate participation and competition in the process as well as successful design and construction of the project with respect to cost, time, and quality. Communications can be maintained through local professional associations and industry trade associations, A-E publications, and construction industry publications. An A-E contracted for RFP preparation can be asked to maintain contacts within the local construction industry, evaluate capabilities and interest, and assess the likelihood of participation in the process.

APPENDIX B

DEVELOPING PERFORMANCE SPECIFICATIONS

1. GENERAL.

a. A primary objective of a "Design-Build" is to allow the construction industry to propose a variety of design and technical solutions for a given facility requirement. To be consistent with this objective, the technical specifications for the facility must allow the widest practical range of designs and construction methods and materials, while at the same time ensuring the quality levels required for the facility. Thus, a performance-oriented specifications method is necessary to describe the facility's engineering and technical requirements in the RFP.

b. Conventional prescriptive specifications indicate a single design and technical solution and are, therefore, inappropriate for exclusive use in a "Design-Build" contract. The content and composition of the technical specifications depend on the requirements and conditions of each specific project.

c. A combination of performance and prescriptive specifications may be appropriate in a "Design-Build" contract, especially where technical or functional requirements necessitate a mixture of dictating (prescribing) a solution in the RFP and allowing a variety of solutions to a fully described performance requirement. The more a RFP is developed to contain actual design drawings and specifications stating actual material and method of construction, the more the project becomes prescriptive; 10 percent design is less prescriptive than 35 percent design, and so on.

d. A fully defined description of functional and technical requirements of a project will ensure a quality and cost effective facility to the customer. To achieve this goal, covering all the functional and technical requirements using the Construction Specification Institute (CSI), 16 Division format will ensure that the project is fully defined.

2. PERFORMANCE-ORIENTED SPECIFICATIONS. In the case of "Design-Build" for MILCON projects, performance [performance-oriented] specifications are required under Title 10 U.S.C. Section 2862.

a. "Performance" specifications set requirements to achieve a desired result, not the means. Features desired must be delineated completely and clearly, measurable or observable criteria must be established, conformance to criteria must be verifiable, and the

specification must be free from unnecessary material and process limitations. In practical terms, however, it is unlikely that all items of a project can be specified adequately in pure performance terms alone.

b. Performance-oriented specifications may be appropriate for a "Design-Build" RFP; these specifications contain both performance and prescriptive requirements. The emphasis of the specification is placed on the performance requirements whenever possible. Prescriptive requirements are included when developing performance requirements is impractical for the specific application, or when only one prescribed solution is appropriate.

3. LEVEL OF CONTROL. When technical specifications are performance-oriented, many elements of final design and material/systems selections are delegated to the offeror and contractor. However, the specifications should not be "wide open" without controls for adequacy and quality. The design agency can exercise varying degrees of control over the proposed design and construction solutions according to the specific project requirements.

a. When advantageous for the project to maximize the potential options available to offerors, the design agency should allow greater latitude in proposing design and technical solutions. This latitude is offered by specifying building elements in mainly performance terms and minimizing constraints on the configuration, materials, and methods. A specification for "Superstructure," for example, would include loading, seismic, fire safety, and other fundamental performance criteria. Performance requirements are qualified by prescriptive criteria only to the extent necessary, such as by design standards for each structural approach. Any variety of steel frame, concrete, precast, load-bearing masonry, or other structural configurations could comply. The offeror is responsible for selecting the structural materials, configuration, and design of the structural system.

b. When determined necessary for the project to limit the potential options available to offerors, the design agency must retain greater control over configurations, materials, and methods. This control is ensured by increasing the specificity of requirements, or, more precisely, describing the specified building element. Doing so reduces the offeror's options to those appropriate for the specific project conditions. For example, the design agency could identify a particular type of building system or component, such as "Steel Superstructure." Here, the performance criteria and material specifications would be tailored to that particular structural type, leaving the actual structural configuration and design at the discretion of the offeror, but within constraints of the construction type described in the RFP. Performance requirements are qualified to a greater extent by prescriptive specifications. At the extreme, the design agency can specify a building element in mainly prescriptive terms if only one solution is appropriate or if it is impractical to develop enforceable performance criteria for that element.

c. The design agency or contracted A-E developing the performance-oriented specifications must consider the appropriate degree of control with regard to the procurement approach used for the project, "Design-Build." Items to consider in this respect are as follows: proposal evaluation for a "Design-Build" project involves design and engineering judgment as a factor in contract award; and distinctions can be drawn between a minimally acceptable proposal and one displaying superior qualities. Therefore, evaluators may exercise a degree of latitude in their judgment about conformance to minimum requirements and qualities exceeding the specified minimums.

d. Performance requirements and criteria must be enforceable and conformance to the specifications must be verifiable. Conformance with performance requirements can be verified through calculation, analyses, materials testing, or simple observation. Verification may occur at any one or several stages throughout the project: at the proposal evaluation stage, during final design and review/approval, or during construction.

4. REFERENCE. The CSI Manual of Practice MP1-11, Performance Specifications and MP2-6, Organization and Format for Performance Specifications provide guidance on specifying performance requirements. This appendix does not duplicate the material contained in these documents; the design agency and/or A-E should consult the latest edition.

5. CRITERIA SOURCES. "Performance-oriented" specifications, national model building codes, industry design standards, and industry consensus standards should be used to the greatest extent practical. This will encourage innovation in building materials and methods of construction, and enhance competition by encouraging proposals from offerors knowledgeable of private sector criteria (unfamiliar with Corps criteria).

a. Appropriate standards for construction methods and materials likely to be proposed for the facility can be included by reference. Federal and military specifications and standards can be included or referenced if these criteria are commonly accepted and used in the local construction market.

b. Corps of Engineers Guide Specifications (CEGS) should be used as a starting point to fill voids where proprietary items are specifically in an industry standard or commercial specification being used, or do not meet the facility's functional requirements, or do not exist for a particular building element. Extracts from government criteria such as Army technical manuals (TM) and engineering manuals (EM) should be used in the RFP to fill voids in private sector design criteria, or project specific government criteria. This is especially true where public law requires specific criteria that effect government projects, i.e., energy conservation.

(1) These documents need not be used verbatim, but should serve to indicate the levels of quality or service appropriate for the facility.

(2) Extracts from the government criteria sources should be placed, or adapted in the RFP. This is usually accomplished in a specific section within the RFP and in the precedence of these criteria in the project design.

c. Original specifications can be developed based on the fundamental performance requirements contained in the RFP; as in all specifications, they must be clear, concise, and complete relative to the functional and technical performance.

6. FORMAT. Performance-oriented specifications should adhere to either the CSI 16-Division Format or to a "matrix" format. The appropriate format is determined by the specifications' content and composition.

a. The CSI 16-Division Format is used by USACE and is recognized throughout the building design and construction industry; CSI "Master Format" as well. The CSI format is a well ordered/structured, widely accepted specification format. However, the 16-Division Format is largely materials-oriented in its Division, Broad-scope, and Narrow-scope headings. In general, this format is appropriate when the design agency exercises a relatively higher degree of control over the configurations, materials, and methods proposed for the facility. This would include cases for which prescriptive specifications are necessary to a relatively greater degree, and for which the latitude or range of options appropriate for the specific project is not inhibited by Division and Broad-scope designations.

b. A "matrix" is a common performance specification format. Building elements comprise one axis of the matrix, with performance attributes comprising the other. Specifications are developed for the appropriate intercepts of building elements and attributes.

(1) Building elements are defined according to major building systems or functional assemblies, without regard to configuration, materials, or method. Building elements or systems can be defined to any degree of detail appropriate for the specific project. A facility's structural requirements can be expressed for the "superstructure" as a whole, or can be further defined according to "vertical structure," "roof deck," "floor deck," "stairs," or similar designation. Table B-1 lists the building elements commonly defined for performance-oriented specifications; all or part may be used as appropriate to the specific design-build project.

(2) Attributes are characteristics of performance to be defined by requirements and criteria. Performance-oriented specifications are developed by applying attributes to building elements. Not all attributes will apply to the same building element, and an attribute will not

necessarily apply to the same building element in all projects. The specification writer must match attributes with building elements properly.

7. SPECIFICATION BY ATTRIBUTE. Specifying by attribute is appropriate for both the CSI 16-Division Format, or "Master Format." Table B-2 lists commonly used performance attributes; all or part may be used as appropriate to the specific design-build project.

a. Once an attribute is associated with a particular building element, the desired performance must be defined. This is done by describing requirements, criteria, and tests. A requirement is a statement of desired results, usually in qualitative terms. Criteria are definitive statements of a performance level, stated in qualitative or quantitative terms. A criterion must be measurable, observable, or otherwise verifiable. A test is the method by which performance is measured and verified.

b. Tests can include calculation or engineering analyses, laboratory or physical testing, or observation. These tests are applied at the appropriate step(s) throughout the project (e.g., proposal evaluation, final design, and construction). State of the art technology permits precise performance criteria to be established for most attributes. It may, however, be difficult to do so for other attributes. In the latter case, it may be necessary to complement general or less precise performance criteria with prescriptive specifications for particular building elements known to provide the required performance.

8. ALTERNATIVE PRESCRIPTIVE SPECIFICATIONS. A hybrid type of performance-oriented specification can include a statement that a particular building element can consist of one of several alternatives, thereby allowing a prescribed number of design or technical options. Each option is specified in traditional prescriptive terms. This approach permits relatively simple specification and evaluation of proposals. In practice, however, it has many disadvantages.

a. Designs are precluded that may provide the intended performance but do not strictly comply with the prescriptive specification. Also, it is unreasonable to include prescriptive specifications for all possible material alternatives for every building element. Furthermore, this approach creates a specification package of considerable volume when applied to many building elements in a facility.

b. Such voluminous specifications place an additional burden on potential offerors, discouraging participation in the procurement and, therefore, competition. The practice of prescriptive specifying options for a single building element should be used only when no other performance-oriented specification technique will yield satisfactory results.

TABLE B-1

TYPICAL DEFINITIONS FOR BUILDING ELEMENTS

SUBSTRUCTURE

Footings and foundations
Slab-on-grade

SUPERSTRUCTURE

Vertical
Horizontal
Stairs and rails

EXTERIOR CONSTRUCTION

Exterior walls
Doors and windows
Grills/vents/louvers
Roof and roofing

INTERIOR CONSTRUCTION

Partitions
Doors and openings
Finishes
Specialties

MECHANICAL

Plumbing
HVAC
Fire protection
Special systems

ELECTRICAL

Power
Service and distribution
Lighting
Special Systems

TABLE B-2
SUGGESTED PERFORMANCE ATTRIBUTES

HEADING 1: SAFETY AND PROTECTION:

- 1.1. Fire Safety.
 - 1. Fire areas
 - 2. Fire barriers
 - 3. Egress means
 - 4. Protective devices
 - 5. Fire resistance/combustibility
 - 6. Fire load/fuel contribution
 - 7. Surface spread of flame
 - 8. Flame propagation
 - 9. Smoke generation
 - 10. Smoke propagation
 - 11. Accidental ignition
- 1.2. Life Safety. (Other Than Fire)
 - 1. Physical safety
 - 2. Electrical safety
 - 3. Toxicity
 - 4. Chemical safety
 - 5. Biological safety
- 1.3. Property Protection.
 - 1. Theft security
 - 2. Security against vandalism
 - 3. Resistance to misuse
- 1.4. Handicapped Considerations.
 - 1. Handicapped usage
 - 2. Mobility impaired usage
 - 3. Vision impaired usage
 - 4. Hearing impaired usage

TABLE B-2 continued

SUGGESTED PERFORMANCE ATTRIBUTES

HEADING 2: FUNCTIONAL:**2.1. Strength.**

1. Static loading
2. Live loading
3. Horizontal loading
4. Deflection
5. Thermal loading
6. Structural serviceability
7. Seismic loading
8. Impact loading
9. Penetration resistance
10. Temporary loads

2.2. Durability.

1. Impact resistance
2. Moisture resistance
3. Thermal resistance
4. Corrosion resistance
5. Chemical resistance
6. Weather resistance
7. Ultraviolet resistance
8. Surface stability
9. Stain resistance
10. Absorbency
11. Cleanability
12. Color resistance
13. Friability/frangibility
14. Abrasion resistance
15. Scratch resistance
16. Dimensional stability
17. Cohesiveness/adhesiveness
18. System life

TABLE B-2 continued

SUGGESTED PERFORMANCE ATTRIBUTES

2.3. Transmission Characteristics.

1. Heat
2. Light
3. Air infiltration
4. Vapor penetration
5. Water leakage
6. Condensation

2.4. Waste Products and Discharge.

1. Solid waste
2. Liquid waste
3. Gaseous waste
4. Odor
5. Particulate discharge
6. Thermal discharge
7. Radiation

2.5. Operational Characteristics.

1. Method of operation
2. Results of operation
3. Cycle time/speed of operation

HEADING 3: SENSIBLE:**3.1. Aesthetic Properties.**

1. Arrangement
2. Composition
3. Texture
4. Color/gloss
5. Uniformity/variety
6. Compatibility/contrast

3.2. Acoustic Properties.

1. Sound generation
2. Sound transmission
3. Reflectance

TABLE B-2 continued

SUGGESTED PERFORMANCE ATTRIBUTES

3.3. Illumination.

1. Level
2. Color
3. Shadow/glare
4. Reflection

3.4. Ventilation.

1. Air quality
2. Velocity
3. Distribution
4. Pressurization
5. Temperature
6. Moisture

3.5. Measurable Characteristics.

1. Levelness
2. Plumbness
3. Dimension/tolerance
4. Volume
5. Flatness
6. Shape
7. Weight/density

3.6. Material Properties.

1. Hardness
2. Ductility/brittleness
3. Malleability
4. Resilience
5. Elasticity/plasticity
6. Toughness
7. Viscosity
8. Creep
9. Friction
10. Thermal expansion

TABLE B-2 continued
SUGGESTED PERFORMANCE ATTRIBUTES

HEADING 4: PRACTICAL:

4.1. Interface Characteristics.

1. Fit
2. Attachment
3. Tolerance
4. Modularity
5. Rotatability
6. Relocatability
7. Erection sequence

4.2. Service.

1. Repairability
2. Interchangeability
3. Accessibility
4. Replaceability
5. Inconvenience
6. Extendibility
7. Adaptability
8. Replacement sequence
9. Service frequency

4.3. Personnel Needs.

1. Maintenance personnel
2. Training

APPENDIX C**EXAMPLE TECHNICAL EVALUATION CRITERIA
FOR
"DESIGN-BUILD" PROPOSAL EVALUATION****GENERAL.**

a. The following items are typical of features or characteristics that should be examined at the quality value rating stage of a "Design-Build" project. This appendix is provided as a starting point (checklist) for developing technical evaluation criteria, supplemented by tables C-1 and C-2, and are not all-inclusive. On a project-by project basis, this list should be used to extract those features determined necessary to distinguish and achieve quality relative to the specific project. (Value rating numbers are purposely not indicated in this appendix.)

b. The A-E or design agency's design team assembles and prepares the evaluation criteria which relate directly to submittal requirements. The evaluation factors also affect offerors expenditures of time, resources, and cost to prepare a proposal. Offerors develop their proposals around submittal requirements and evaluation factors stated in the RFP. To this extent it is important to select, minimize the number of features as evaluation criteria, to those that will aide in distinguishing a range of minimum quality acceptable to higher quality desired for the project; too many evaluation factors will cause extensive design just to prepare a proposal.

c. This appendix has been divided into three parts; viz., PART A: Building Related Features as Technical Evaluation Criteria; PART B: Offeror's Qualification as Technical Evaluation Criteria; and PART C: Offeror's Management Plan as Technical Evaluation Criteria.

PART A: Building Related Features as Technical Evaluation Criteria.

1. **SITE DESIGN.** While the site design is an important feature of a project, detailed site design solution/drawings are not normally (but may be prescribed in the RFP) an evaluation criterion for a design-build offer. However, if made part of the offerors' proposals, factors and subfactors listed below would be appropriate for consideration.

a. Building location/orientation.

(1) Visual prominence: evaluate the building's placement on the site for visibility and/or visual impact within the local environment. Consider views and vistas both toward

and from within the building.

(2) Site utilization: evaluate the building's placement in terms of function and efficient utilization of the site. Consider preservation of existing trees and other features.

(3) Orientation: evaluate the building's orientation and the relationships of functions and activities to the site and the vicinity. Assess the orientation with regard to solar, wind, and other environmental conditions.

(4) Master-planned projects: evaluate the design considerations given to the building's site circulation, orientation, and appearance with respect to master-planned projects.

b. Vehicular circulation.

(1) Access to site: evaluate the site design for efficiency of access to and from the area. Consider the visual identity of driveways and entrances to the site, integration with the local traffic patterns, and the distinction between service traffic and normal automobile traffic.

(2) Circulation within site: evaluate the site design for traffic flow within the area. Consider convenience of access to parking spaces and drop-off areas, movement within parking lots, accessibility of service traffic, and any potential conflicts in traffic patterns.

(3) Safety: evaluate vehicular circulation patterns for potential safety hazards, both vehicular and pedestrian.

c. Pedestrian circulation.

(1) Site circulation: evaluate the site design for pedestrian traffic flow within the area. Consider building accessibility from the vicinity and from other activity areas within the site. Consider pedestrian movement among all activity areas within the site. Assess the accommodation and flow of pedestrian traffic within parking areas.

(2) Safety: evaluate pedestrian circulation for safety and possible conflicts with vehicular traffic on the site or when entering or exiting the site.

d. Parking.

(1) Number of spaces: consider adding parking spaces to exceed the specified minimum.

(2) Handicapped provisions: evaluate the location and arrangement of handicapped parking. Consider accessibility to the building entrances.

(3) Proximity to building: evaluate distances and location of parking areas with respect to the building's entrances. Consider the location and configuration of handicapped parking spaces.

(4) Appearance: evaluate the landscaping, use of islands, and other aesthetic characteristics of the parking areas.

(5) Maintainability: evaluate the location and arrangement of parking areas in terms of snow removal, leaf and litter accumulation, and other maintenance needs.

e. Landscaping.

(1) Overall landscape design: evaluate the overall landscape design for functionality and integration with the natural environment and building design. Consider the landscape design's response to solar, wind, and other environmental conditions.

(2) Landscape materials: evaluate the landscape materials for appearance and heartiness within the local environment. Consider qualities exceeding the specified minimums.

(3) Maintainability: evaluate the use of landscape materials, landscape fixtures and accessories, and design configuration with respect to routine maintenance operations. Consider requirements for mowing, pruning, and trimming. Assess the vulnerability to damage vehicular and pedestrian traffic and other site activities.

2. Site Engineering. While the site engineering is an important feature of a project, detailed site engineering solutions/drawings would not normally be an evaluation criterion for a design-build offer. However, if made part of the offerors' proposals, factors and subfactors listed below would be appropriate for consideration.

a. Grading and drainage.

(1) Drainage layout: evaluate the storm drainage layout for anticipated performance. Consider the susceptibility of inlets to clogging.

(2) Relation to site activities: evaluate the grading and storm drainage layout regarding coordination with other site systems and activities. Consider placement of inlets, catch basins, culverts, etc.

b. Sanitary sewer.

(1) Layout: evaluate the sanitary sewer layout for efficiency and maintainability.

(2) Materials: evaluate the sanitary sewer materials for qualities exceeding the specified minimums.

c. Water supply.

(1) Layout: evaluate the water supply layout for efficiency and maintainability.

(2) Materials: evaluate the water supply materials for qualities that exceed the specified minimums.

d. Electrical.

(1) Layout: evaluate the electrical layout for efficiency and maintainability.

(2) Materials: evaluate the electrical materials for qualities exceeding the specified minimums.

3. Architectural Design. Even though aspects of architectural design are important features of a project, detailed architectural design solution/drawings would not normally be an evaluation criterion for a design-build offer. Often architectural design features, architectural theme, interior functional layout, and the performance requirements for building systems and materials are provided in the RFP. The quality of the project and the opportunity for innovative competitive bids are enhanced by proper selection of evaluation factors as listed below:

a. Functional arrangement.

(1) Overall plan arrangement: evaluate the overall arrangement of spaces, functions, and activity areas, and the relationships among them. Consider the arrangement of each primary space and the utility of supporting spaces to the primary functions.

(2) Building circulation: evaluate the circulation patterns within the building. Consider the adjacencies and proximity of spaces and the flow of activities among them.

(3) Integration with site activities: evaluate the relationship of the building's functions with the site design and activities.

(4) Acoustic control: evaluate the building's design, construction, and use of

materials to control acoustics. Consider sound transmission between spaces, reverberation within spaces, and sound generation by mechanical and other equipment.

(5) Visual control: evaluate the building's design regarding visual access and isolation between and among spaces and functions.

(6) Daylighting: evaluate the building's design for effectiveness of fenestration and daylighting.

b. Net floor area. Evaluate the potential advantage of increasing the net floor area over the specified minimums in program or RFP: [list the appropriate spaces or areas].

c. Exterior appearance.

(1) Compatibility within the existing environment: evaluate the building's design for compatibility within the existing architectural and natural environment.

(2) Building form: evaluate the building's design in terms of form, shape, proportion, proper scale, and expression of functions and interior activities.

(3) Elevations: evaluate the building's elevations and exterior appearance. Consider the fenestration arrangement, articulation, and overall detailing.

(4) Use of exterior materials: evaluate the use of exterior materials. Consider their contribution to the overall architectural design and appearance of the building within the existing environment.

4. INTERIOR DESIGN. Like the discussion on the architectural evaluation criteria, interior design is an important feature of a project, detailed interior design solution/drawings would not normally be an evaluation criterion for a design-build offer. Often interior design features and the performance requirements for building systems and materials are provided in the RFP, but the quality of the project and the area for innovative competitive bid will be enhanced by proper selection of evaluation factors as listed below:

a. Overall design scheme. Evaluate the overall interior design scheme. Consider appearance, function, use of materials, and maintainability.

b. Design for safety. Evaluate the interior design scheme for any potential hazards. Consider the location of fixtures and equipment, detailing of protruding features, suitability of finishes, and detailing of installed items.

c. Finish of building utilities. Evaluate the appearance of building utilities for

concealment, color, detailing, and consistency with the overall interior design scheme.

d. Color. Evaluate the use of color and decorative graphics in the overall interior design scheme.

e. Signage and graphics. Evaluate signage and informational graphics for legibility and functional effectiveness, appearance, and character form.

f. Finishes.

(1) Flooring: evaluate flooring for appearance, durability, and maintainability. Consider qualities exceeding the specified minimums.

(2) Wall surfaces: evaluate wall surfaces for appearance, durability, and maintainability. Consider qualities exceeding the specified minimums.

(3) Ceilings: evaluate ceiling surfaces for appearance, durability, and maintainability. Consider qualities exceeding the specified minimums.

(4) Fixtures and trim: evaluate light fixtures, built-in cabinets, trim and molding, and other finish work for appearance, durability, and maintainability. Consider qualities exceeding the specified minimums.

5. BUILDING ENGINEERING. While the aspects of building engineering are important features of a project, detailed engineering design solution/drawings would not normally be an evaluation criterion for a design-build offer. Often building engineering solutions are based on performance requirements for building systems and materials provided in the RFP, but the quality of the project and the area for innovative competitive bid will be enhanced by proper selection of evaluation factors as listed below:

a. Overall construction quality. Evaluate the building's overall engineering and detailing quality. Consider qualities exceeding the specified minimums.

b. Structural design.

(1) Design criteria: evaluate the potential advantage in exceeding the minimum specified structural criteria in any areas of the structural design.

(2) Layout: evaluate the structural layout for compatibility with the facility's activities and plan layout.

(3) Integration with other systems: evaluate the structural design in terms of interface and accommodation of other building architectural and mechanical systems.

(4) Materials: evaluate structural materials for qualities exceeding the specified minimums.

c. Exterior materials and systems.

(1) Roof system: evaluate the weather-tightness, longevity, and detailing of the roof system. Consider qualities exceeding the specified minimums.

(2) Wall construction: evaluate the weather-tightness, longevity, and detailing of the exterior wall system. Consider qualities exceeding the specified minimums.

(3) Windows, doors, openings: evaluate the weather-tightness, longevity, and detailing of the windows, doors, and other exterior openings. Consider qualities exceeding the specified minimums.

d. Mechanical systems (HVAC).

(1) Design criteria: evaluate the anticipated performance and effectiveness of the proposed mechanical scheme. Consider performance exceeding the specified minimums.

(2) Equipment and materials: evaluate the selected mechanical equipment and materials for anticipated performance, maintainability, and service life. Consider performance exceeding the specified minimums.

(3) Layout: evaluate equipment location and distribution layout for efficiency, and maintainability. Consider their integration with other building mechanical systems.

e. Mechanical systems (plumbing).

(1) Design criteria: evaluate the anticipated performance and effectiveness of the proposed plumbing scheme. Consider performance exceeding the specified minimums.

(2) Equipment and materials: evaluate the selected plumbing equipment and materials for anticipated performance and maintainability.

(3) Layout: evaluate equipment location and distribution layout for efficiency maintainability. Consider the integration with other building mechanical systems.

6. LIFE-CYCLE COST. In the absence of a requirement for life-cycle cost requirements, especially if the performance specifications are not written to obtain high quality, then project value from a life-cycle standpoint is a risk to the customer. Life-cycle cost as an evaluation criterion can be used to strengthen the possibility of a high quality product. Consider the factors and subfactors listed below when life-cycle is to be an evaluation criterion.

a. Energy use.

(1) Calculated energy cost: incorporate the calculated energy cost for HVAC and lighting systems into the proposal price [as appropriate for the specific project and evaluation approach].

(2) Calculated/simulated energy budget: incorporate the calculated or simulated energy budget for HVAC and lighting systems into the quality point score [as appropriate for the specific project and evaluation approach].

(3) Proposed energy budget: incorporate the proposed energy budget for HVAC and lighting systems into the quality point score [as appropriate for the specific project and evaluation approach].

(4) Qualitative evaluations for the energy use of HVAC and lighting systems can be included in the evaluation of each system.

b. Repair, Maintenance, and Replacement.

(1) Calculated repair and maintenance cost, and replacement: incorporate the calculated repair and maintenance costs, and replacement costs into the proposal price [as appropriate for the specific project and evaluation approach].

(2) Qualitative evaluations for repair and maintenance, and replacement of building systems and materials can be included in the evaluation of each system.

(3) Replacement cycles: incorporate anticipated replacement cycles into the quality point score [as appropriate for the specific project and evaluation approach].

PART B: Offeror's Qualifications as Evaluation Criteria:

1. PERSONNEL.

a. Identification. Evaluate whether the names, resumes, registration data, and levels of responsibility for personnel assigned to design and construction activities reflect quality

personnel with the proper credentials.

b. Experience. Evaluate whether each individual identified has had a significant part in any of the project examples cited and consider the number of years each has been in his/her respective profession.

c. Reassignment. If reassignment of personnel is considered possible, evaluate the quality of the alternative professionals identified using the standards mentioned above.

2. PROJECT EXAMPLES.

a. Projects. Evaluate the project examples submitted for overall standard of quality, similarity to the proposed project, and congruity with the same level of standards required for the proposed project.

b. Reference contact. Assess the degree of satisfaction and recommendation for a "Design-Build" team's work reflected by previous clients.

c. Content of project examples. For each example cited, evaluate the general characteristics, scope, location, cost, and date of completion.

d. Joint ventures. Evaluate the project examples cited by each of the firms involved and whether they have experience working together. Consider the above mentioned qualities when evaluating each firm.

3. COMMITMENT.

a. Statement. Evaluate the nature of the offeror's commitment of personnel and resources to the project, as required from the principal-in-charge.

b. Joint venture. If the project is a joint venture, evaluate the nature of the commitment from each firm involved.

4. LIQUIDATED DAMAGES.

a. Explanation. Evaluate the list and explanation furnished on all projects for which liquidated damages have been assessed. Consider the time periods involved (i.e., how long delinquent or past deadline). Evaluate the circumstances involved in each case and the reasons for assessing liquidated damages. Judge the likelihood of the "Design-Build" team to incur delays and liquidated damages for the project under consideration.

b. Joint venture. If the project is a joint venture, evaluate the explanations furnished for assessed liquidated damages on projects from each firm involved.

5. TERMINATION.

a. Explanation. Evaluate the list and explanation furnished on all projects from which the offeror has been terminated for default or for convenience. Consider a designated time period, the circumstances involved in each case, and the reasons for termination.

b. Joint venture. If the project is a joint venture, evaluate these explanations for each firm involved.

6. FORMS.

a. Required forms. Check whether the offeror has submitted American Institute of Architects (AIA) forms A305 and B431. Consider the thoroughness of completion and the clarity.

b. Additional forms. Evaluate additional information submitted on the offeror's qualifications. Consider the usefulness and conciseness of the information in describing these qualifications.

PART C: Offeror's Management Plan as Evaluation Criteria:

1. QUALITY CONTROL PLAN.

a. Identification. Evaluate the offeror's clarity in identifying the personnel responsible for quality control and in the policy establishing their authority. Consider how the Quality Control Office can objectively exercise his/her responsibilities within the contractor's organization.

b. Description. Assess whether the description of tasks and functions for quality control personnel is specific enough to understand their purpose clearly.

c. Schedules. Evaluate the offeror's ability to define a specific policy that establishes schedules for performance of quality control tasks.

d. Findings. Check whether the program contains an adequate policy for reporting quality control findings to the Contracting Officer. Consider if the Quality Control Officer may be in a position where he/she is inhibited from reporting negative quality control findings.

e. Disputes. Check whether the program contains an appeal system that clearly defines the Contracting Officer as the person to resolve disputes that have not received satisfactory responses from the first levels of quality control personnel.

f. Test data. Assess whether the program provides the names of laboratories to be used and identifies the procedures used for test data reporting. Consider the reputation and responsiveness of the lab(s).

g. Material storage. Evaluate the program's plan for the storage and protection of construction materials. Consider the security plan for the materials as well as the methods of protection.

2. DESIGN AND CONSTRUCTION SCHEDULE.

a. Phases. Evaluate the offeror's ability to identify and implement a schedule for all phases of the project.

b. Rationale. Evaluate the submission stating the offeror's rationale on how the proposed schedule will be achieved. Consider if it is realistic, if the dates set for the completion of items are feasible or if it is talk-oriented, check whether it indicates dates by which construction milestones are to be achieved.

c. Graphics. Evaluate the graphic representation of the schedule. Consider its clarity in enabling the Contracting Officer to monitor the progress easily.

3. MOBILIZATION PLAN.

a. Immediate mobilization.

(1) On-site contractor facilities. Evaluate the length of time scheduled to set up office facilities on the site with regard to the date of the preconstruction conference. Consider the arrangements presented for telephones, utilities, parking areas, storage facilities, security measures, and signage.

(2) Personnel. Evaluate the arrangement proposed for assembling the necessary personnel to prepare the site and facilities for construction.

(3) Equipment. Evaluate the arrangements proposed for assembling the equipment needed to prepare the site and facilities according to the construction schedule.

b. Site organization.

(1) Construction plan. Evaluate the offeror's intent to furnish a detailed site construction plan upon contract award. Consider the representation of all construction facilities, on-site temporary buildings and equipment, assigned storage and operating areas, roads, parking areas, and entrances.

(2) Temporary construction. Evaluate the offeror's plan to construct temporary roads and parking areas, erect necessary signs, fences, and gates, and install telephone and utility connections upon contract award.

(3) Utilities. Evaluate the offeror's assurance that all existing utilities and power lines will be located properly by the respective companies and authorities prior to initiating work.

4. DEMOBILIZATION PLAN.

a. Scheduling. Check whether the offeror intends to start demobilization planning as soon as work begins. Note if detailed staging plans will be developed for each phase of construction to improve safety and working conditions. Consider plan for removing materials/equipment and eliminating unnecessary equipment, materials, and personnel from the site.

b. Coordination. Check whether a specific demobilization schedule will be developed in coordination with the project closeout plan and with all subcontractors. Consider the plan to create appropriate checklists and procedures for site closeout and facility turnover, the listing of specific dates for removal of equipment and construction facilities, departure of personnel, and arrangements for the discontinuance of telephones and utilities.

5. LOGISTICS PLAN.

a. Scheduling methods. Evaluate items included in the scheduling process. Consider key activities, critical and long-lead time materials, subcontractor requirements, allowance for change orders, coordination meetings, and frequency of schedule updates.

b. Material procurement. Evaluate the plan for the ordering and receipt of materials/equipment that could affect the project schedule. Consider how the schedule will

be monitored and expedited, and the personnel who will be responsible for it.

c. Management of subcontractors. Evaluate the plan to prevent impact on the project schedule through errors or omissions by subcontractors. Consider supervisory and administrative functions that will enhance the subcontractor's performance and prevent delays. Note, if the superintendent will closely track the progress of each subcontractor.

d. Manpower use. Check whether the work force proposed for the project is carefully controlled and monitored throughout the duration of the project and with whom the ultimate control of work force rests. Evaluate the offeror's plan to track personnel costs and the time basis on which these labor reports will be produced.

e. Productivity monitoring. Evaluate what the offeror uses as a measuring device to help assess job productivity. Consider the proposed scheduling methods, what the subcontractors are required to submit for scheduling methods (e.g., identification of the appropriate labor hours, crew sizes, number of crews, and scheduled usage of crews), and what methods are proposed to meet schedules (e.g., increasing crew size, increasing crews, overtime and shift work to meet schedules).

6. FUNDS CONTROL PLAN.

a. Subcontractors and suppliers. Evaluate the corporate purchasing power and reputation. Consider the prompt payment policy to subcontractors and suppliers upon proper invoicing and completion of work as scheduled. Consider the offeror's plan to purchase supplies and materials from local sources

b. Financial condition. Evaluate the offeror's financial condition of each subcontractor prior to issuing subcontracts.

7. CONTRACT CLOSEOUT PLAN.

a. General procedure. Evaluate the proposed scheme for closing the contract agreement and the offeror's duties.

b. Provisions.

(1) Record documents: evaluate the plan to transfer changes recorded on the record set of prints and other documents used during the construction period to the reproducible drawings in a neat, legible manner; corrected material should be turned over to the owner as a permanent record.

(2) Punch list and final inspection: evaluate the offeror's plan to provide to the owner, in writing, the date the work will be ready for final inspection in accordance with the contract.

(3) Substantial completion and final payment: evaluate the offeror's plan to complete all work on the punch list and to prepare the Certificate of Substantial Completion for turnover and beneficial occupancy.

(4) Warranties: evaluate the offeror's plan to provide warranties and operation/maintenance manuals for materials and equipment. Consider the need for serial numbers, model numbers, suppliers, points of contacts, telephone numbers, description, number of copies, and personnel responsible during the warranty period.

(5) Cleanup: evaluate the provisions for cleanup prior to owner takeover. Consider the removal of temporary facilities, trash, and debris from the construction site and additional provisions that will be furnished in the specifications once the contract is awarded.

(6) Operation, maintenance, training: evaluate the proposed provisions for supplying all necessary operating, maintenance and repair instructions, obtaining spare parts, and training personnel if required. Consider if all necessary items are addressed and if the DPW will be well prepared to operate the facility.

(7) Point of contact: evaluate the plan to assign an authoritative person to handle warranty matters. Consider the ease of access to this person and whether both contractor and subcontractor are represented.

TABLE C-1**EXAMPLE EVALUATION FACTORS AND SUBFACTORS /1**

1. SITE DESIGN (if required and necessary as a selection factor)

- a. Building location; orientation
 - 1) Visual prominence on the site
 - 2) Site utilization
 - 3) Orientation to environmental conditions
 - 4) Relationship to future master-planned projects or facilities.
- b. Vehicular circulation
 - 1) Access to site
 - 2) Circulation within site
 - 3) Safety
- c. Pedestrian circulation
 - 1) Site circulation
 - 2) Safety
 - 3) Handicapped provisions
- d. Parking
 - 1) Number of spaces
 - 2) Handicapped provisions
 - 3) Proximity to building
 - 4) Esthetics
 - 5) Maintainability
- e. Landscaping
 - 1) Overall landscape design
 - 2) Landscape materials
 - 3) Maintainability

2. SITE ENGINEERING (if required and necessary as a selection factor)

- a. Grading and drainage
 - 1) Drainage layout
 - 2) Relationship to site activities

TABLE C-1 continued

EXAMPLE EVALUATION FACTORS AND SUBFACTORS /1

b. Sanitary sewer

- 1) Layout
- 2) Materials

c. Water supply

- 1) Layout
- 2) Materials

d. Electrical

- 1) Layout
- 2) Materials

3. ARCHITECTURAL DESIGN

a. Functional arrangement

- 1) Overall plan arrangement; proximities, adjacencies
- 2) Building circulation
- 3) Integration with site activities
- 4) Acoustic control
- 5) Visual control
- 6) Daylighting

b. Net floor area (exceeding minimum requirements)

c. Exterior appearance

- 1) Compatibility within existing environment
- 2) Building form, shape
- 3) Elevation appearance
- 4) Detailing
- 5) Use of exterior materials

4. INTERIOR DESIGN (if required and necessary as a selection factor)

a. Overall design scheme

b. Design for safety

TABLE C-1 continued

EXAMPLE EVALUATION FACTORS AND SUBFACTORS /1

- c. Finish of building utilities
 - d. Colors
 - e. Signage and graphics
 - f. Finishes
 - 1) Flooring
 - 2) Wall surfaces
 - 3) Ceilings
 - 4) Fixtures and trim
- 5. BUILDING ENGINEERING** (if required and necessary as a selection factor)
- a. Overall construction quality, detailing
 - b. Structural design
 - 1) Design criteria
 - 2) Layout
 - 3) Integration with other systems
 - 4) Materials
 - c. Exterior materials and systems
 - 1) Roof system
 - 2) Wall construction
 - 3) Windows, doors, openings
 - d. Mechanical systems--heating, ventilating, and air-conditioning (HVAC)
 - 1) Design criteria
 - 2) Layout
 - 3) Equipment and materials
 - e. Mechanical systems--plumbing
 - 1) Design criteria
 - 2) Layout
 - 3) Equipment and materials

TABLE C-1 continued

EXAMPLE EVALUATION FACTORS AND SUBFACTORS /1

- f. Electrical systems
 - 1) Design criteria
 - 2) Layout
 - 3) Equipment and materials
- 6. LIFE-CYCLE COST (if required and necessary as a selection factor)
 - a. Energy use
 - 1) HVAC
 - 2) Lighting
 - b. Repair and maintenance
 - c. Replacement

/1 These factors and subfactors are typical of those that should be considered for the quality value evaluation of the technical areas in proposals using "Design-Build" procedures. They are not all-inclusive. This list must be tailored to reflect the appropriate conditions for a specific project.

TABLE C-2
EXAMPLE Offeror QUALIFICATION EVALUATION
FACTORS AND SUBFACTORS /1

Offeror QUALIFICATION EVALUATION CRITERIA

1. Personnel
 - a. Identification
 - b. Experience
 - c. Reassignment
2. Project Examples
 - a. Projects
 - b. Reference Contact
 - c. Content for Project Examples
 - d. Joint Ventures
3. Familiarity With Government Contracts
 - a. Past Contracts
 - b. Joint Ventures
4. Commitment
 - a. Statement
 - b. Joint Ventures
5. Liquidated Damages
 - a. Explanation
 - b. Joint Venture
6. Termination
 - a. Explanation
 - b. Joint Ventures
7. Forms
 - a. Required Forms
 - b. Additional Forms

TABLE C-2 continued

**EXAMPLE Offeror QUALIFICATION EVALUATION
FACTORS AND SUBFACTORS /1**

MANAGEMENT PLAN EVALUATION CRITERIA

1. Quality Control Plan
 - a. Identification
 - b. Description
 - c. Schedules
 - d. Findings
 - e. Disputes
 - f. Test Data
 - g. Material Storage
2. Design and Construction Schedule
 - a. Phases
 - b. Rationale
 - c. Graphics
3. Mobilization Plan
 - a. Immediate Mobilization
 - 1) On-site Contractor Facilities
 - 2) Personnel
 - 3) Equipment
 - b. Site Organization
 - 1) Construction Plan
 - 2) Temporary Construction
 - 3) Utilities
4. Demobilization Plan
 - a. Scheduling
 - b. Coordination
5. Logistics Plan
 - a. Scheduling Methods
 - b. Material Procurement
 - c. Management of Subcontractors

TABLE C-2 continued**EXAMPLE Offeror QUALIFICATION EVALUATION
FACTORS AND SUBFACTORS /1**

-
- d. Manpower Utilization
 - e. Productivity Monitoring
 - 6. Funds Control Plan
 - a. Subcontractors and Suppliers
 - b. Financial Condition
 - 7. Contract Closeout Plan
 - a. General Procedures
 - b. Provisions
 - 1) Record Documents
 - 2) Punch List and Final Inspection
 - 3) Substantial Completion and Final Payment
 - 4) Warranties
 - 5) Cleanup
 - 6) Operation, Maintenance, Training
 - 7) Contact Person

/1 These factors and subfactors are typical of those that should be considered for the quality value evaluation of the technical areas in proposals using "Design-Build" procedures. They are not all-inclusive. This list must be tailored to reflect the appropriate conditions for a specific project.

APPENDIX D**EXAMPLE PROPOSAL SUBMITTAL REQUIREMENTS****1. INTRODUCTION.****a. The purpose for submittals.**

(1) To provide enough information for the using agency and USACE elements to determine whether the proposed facility will meet the RFP functional requirements for operational use during the anticipated life of the facility. Submittal requirements in a "Design-Build" proposal, help in distinguishing the degree to which the proposal exceeds the minimum requirements; functional, technical and quality .

(2) To provide the USACE design agency with enough data to determine the engineering sufficiency and soundness of the proposed design.

(3) To enable the offeror to develop a fair, reasonable and competitive price proposal or bid to the Government.

b. The material content for submittals. The required submittal material will vary according to the specific project conditions, the offerors' responsibilities for design, and the procurement method used for the project ("Design-Build"). Proposals must provide enough information to enable the Government to conduct a complete and valid evaluation, yet must not require such an expenditure of time, effort, and cost as to discourage participation in the procurement. The RFP with sketch layouts or drawings should be developed to no more than approximately 10 to 15 percent complete to maximize innovation by offerors; to 35 percent and above is permitted, but reduces innovation of materials and methods of construction, and effects competition. The degree to which submittal requirements are to be developed must be described clearly in the RFP submittal requirements.

c. Design and technical submittal requirements. Typical "Design-Build" technical submittal requirements are listed below. The USACE design agency or contract A-E preparing the RFP should only select submittal requirements deemed necessary and appropriate to convey sufficient information that can be used to evaluate offerors proposals relative to the specific project.

2. SITE DESIGN. (If Offeror's Responsibility)

a. Site analysis narrative. Provide a brief description of the basic site layout and the rationale behind this design. Address environmental conditions, existing site features, and

the relationship of the site and building activities to the surrounding environment.

b. Site plan(s). Include the following;

- (1) Building outline.
- (2) Finish contours and retaining walls.
- (3) Floor elevation.
- (4) Sidewalks, road, service areas, parking, and ramps.
- (5) Existing buildings (as appropriate).
- (6) Landscape design and materials.
- (7) Site fixtures and accessories.

3. SITE ENGINEERING. (If Offeror's Responsibility)

a. Site civil plan(s). Include the following;

- (1) Storm drainage layout indicating swales, inlets, and culverts.
- (2) Water supply layout indicating controls.
- (3) Sanitary sewer layout.
- (4) Gas Supply layout indicating controls.
- (5) Steam or hot water supply layout indicating controls.
- (6) Electrical distribution layout indicating transformer locations.

4. ARCHITECTURAL DESIGN.

a. Architectural design narrative. Provide a brief description of the building's architectural configuration and the rationale behind the design. Address environmental conditions, the relationship of the site and its activities to the building, appearance of the building, response to the architectural program requirements, selection of interior and exterior materials, and construction techniques. Describe fire safety measures, including fire egress routes, stair and passage dimensions, detection and alarm systems, and fire

suppression systems.

b. Floor plan(s). Include the following;

- (1) Walls and partitions.
- (2) Doors, windows, and openings.
- (3) Overall exterior dimensions and basic interior dimensions.
- (4) Location of equipment, furnishings, and other plan features.
- (5) Room titles and net areas.
- (6) Personnel occupancy.

c. Elevations. Include the following;

- (1) Exterior materials.
- (2) Fenestration, openings, and doors.
- (3) Foundation outline, and finish grade.
- (4) Grilles, rails, and other architectural specialties.

d. Sections, one long dimension, one short dimension: Include the following;

- (1) Roof, floor, and foundation structure, finish grade.
- (2) Wall thickness.
- (3) Ceilings.
- (4) Overall vertical dimensions; interior vertical clearances,

e. One typical wall section. Include the following;

- (1) Materials.
- (2) Wall thickness.

- (3) Wall structure.
- (4) Surfaces and finishes.
- (5) Thermal insulation.
- (6) Water, moisture, and vapor protection.
- (7) Detail at roof.
- (8) Detail at floors.
- (9) Detail at foundation.

f. **Door, window, and equipment schedules [as appropriate].**

5. INTERIOR DESIGN.

a. **Interior design description.** Briefly describe the building's interior design scheme and the rationale behind it. Include product literature and other descriptive materials, as appropriate. Address function, appearance, use of materials, considerations for safety or prevention of hazards, and considerations for the detailing or concealment of building utilities.

b. **Cabinets and trim.** Provide product literature or other descriptive materials, as appropriate.

c. **Color scheme.** Provide color samples, as appropriate.

d. **Signage and graphics.** Provide product literature or other descriptive materials, as appropriate.

e. **Finishes.** Provide a finish schedule. Provide color photographs of finish sample boards or other descriptive materials, as appropriate.

6. BUILDING ENGINEERING.

a. **Outline specifications.** Provide outline specifications for the facility in CSI 16-Division Format. Include product literature and other descriptive material, as appropriate, to describe the proposed materials and systems.

b. Structural design.

(1) Provide a brief narrative description of the proposed structural approach. Describe the basic construction type and major structural materials. Indicate the rationale behind the proposed structural approach.

(2) Identify the codes, standards, criteria, and design methods around which the structural design will be developed. Indicate how the specified minimum structural criteria will be met or exceeded in the proposed design.

(3) Provide a basic structural plan, if not evident in the architectural drawings. Indicate items such as bay dimensions, expansion joints, seismic joints, and control joints.

c. Mechanical systems (HVAC).

(1) Provide a brief narrative description of the proposed mechanical design. Indicate the rationale behind the selection of the proposed systems. Address the fuel source, environmental conditions, thermal envelope design, and operating characteristics of the HVAC system.

(2) Identify the codes, standards, criteria, and design methods around which the mechanical design will be developed. Indicate how the specified minimum mechanical and environmental criteria will be met or exceeded in the proposed design.

(3) Provide a basic mechanical plan. Indicate locations of equipment, distribution system, thermostat, and controls.

(4) Supply and equipment schedule. Describe the mechanical equipment, and include product literature and other descriptive material, as appropriate.

d. Mechanical systems (plumbing).

(1) Provide a brief narrative description of the proposed plumbing design. Indicate the rationale behind selection of these systems.

(2) Identify the codes, standards, criteria, and design methods around which the plumbing design will be developed. Indicate how the specified minimum plumbing criteria will be met or exceeded in the proposed design.

(3) Provide a plumbing plan. Indicate locations of equipment distribution system, valves, cleanouts, and controls.

(4) Provide a plumbing schedule. Describe the plumbing fixtures and equipment. Include product literature and other descriptive material, as appropriate.

e. Electrical systems.

(1) Provide a brief narrative description of the proposed electrical and lighting designs. Indicate the rationale of selecting these systems.

(2) Identify the codes, standards, criteria, and design methods around which the electrical and lighting designs will be developed. Indicate how the specified minimum electrical criteria will be met or exceeded in the proposed design.

(3) Provide an electrical plan. Indicate locations of equipment, distribution system, and controls.

(4) Include a lighting plan. Indicate fixture and switch location and types.

(5) Provide an electrical schedule. Describe the electrical and lighting fixtures and equipment. Include product literature and other descriptive material, as appropriate.

7. LIFE-CYCLE COST.

a. Energy use. [Include the appropriate criterion.]

(1) Identify a proposed energy budget for the facility that must be verified and enforced during final design. Indicate factors for HVAC systems, lighting, and plumbing systems.

(2) Provide the specified energy budget analysis for the proposed building.

(4) Provide a plumbing schedule. Describe the plumbing fixtures and equipment. Include product literature and other descriptive material, as appropriate.

e. Electrical systems.

(1) Provide a brief narrative description of the proposed electrical and lighting designs. Indicate the rationale of selecting these systems.

(2) Identify the codes, standards, criteria, and design methods around which the electrical and lighting designs will be developed. Indicate how the specified minimum electrical criteria will be met or exceeded in the proposed design.

(3) Provide an electrical plan. Indicate locations of equipment, distribution system, and controls.

(4) Include a lighting plan. Indicate fixture and switch location and types.

(5) Provide an electrical schedule. Describe the electrical and lighting fixtures and equipment. Include product literature and other descriptive material, as appropriate.

7. LIFE-CYCLE COST.

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(1) Identify a proposed energy budget for the facility that must be verified and enforced during final design. Indicate factors for HVAC systems, lighting, and plumbing systems.

(2) Provide the specified energy budget analysis for the proposed building.